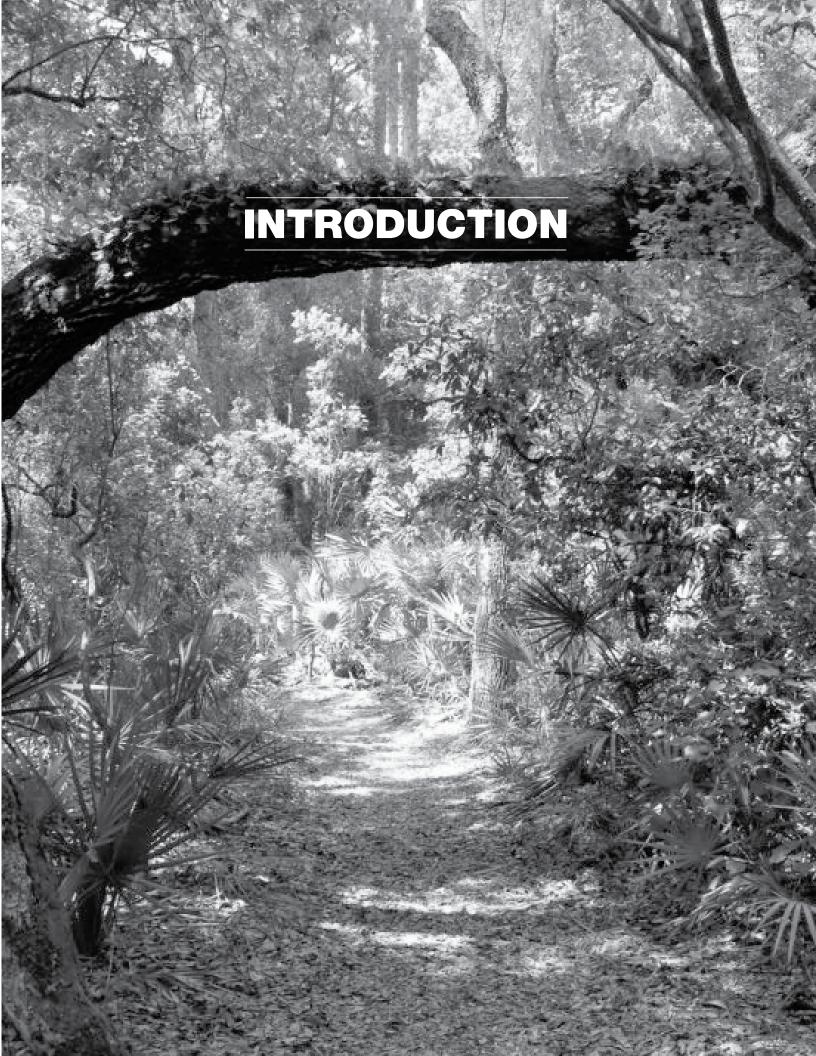


Florida Department of Agriculture and Consumer Services

2009-2010





INTRODUCTION

This annual report summarizes the activities of the Florida Department of Agriculture and Consumer Services during fiscal year 2009-2010. The report is organized according to the Department's major functions, which include supporting Florida agriculture, promoting Florida agricultural products, ensuring a safe and wholesome food supply, preserving the natural environment, and safeguarding consumers.

With over 3,000 employees organized under 18 divisions and offices, the Department is the largest and most diverse state agriculture agency in the country. Its responsibilities are so varied and extensive that it is difficult to imagine any Floridian whose life is not touched by the work it does.

Support services offered to agriculture by the Department include collecting statistics on production, administering animal health programs, testing seed, feed, and fertilizer, operating 13 wholesale state farmers' markets, and ensuring a rapid, coordinated response to animal and agricultural emergencies. The Department's Office of Agricultural Law Enforcement investigates crimes involving agriculture, horticulture, aquaculture and consumer fraud. The Bureau of Agricultural Dealer's Licenses helps growers reduce their financial risk through its administration of Florida's Agricultural License and Bond Law.

The Department is statutorily mandated to provide professional marketing services to Florida's agricultural community through its Division of Marketing and Development. Each year the division conducts over 200 marketing enterprises to generate sales and advertising impressions. During this fiscal year, marketing representatives participated in high-profile trade events in Germany, Singapore, Canada, Saudi Arabia, and Morocco. The division's retail campaigns involved more than 11,000 stores worldwide and generated more than \$132 million in sales. Nine different advertisements ran in print and online publications.

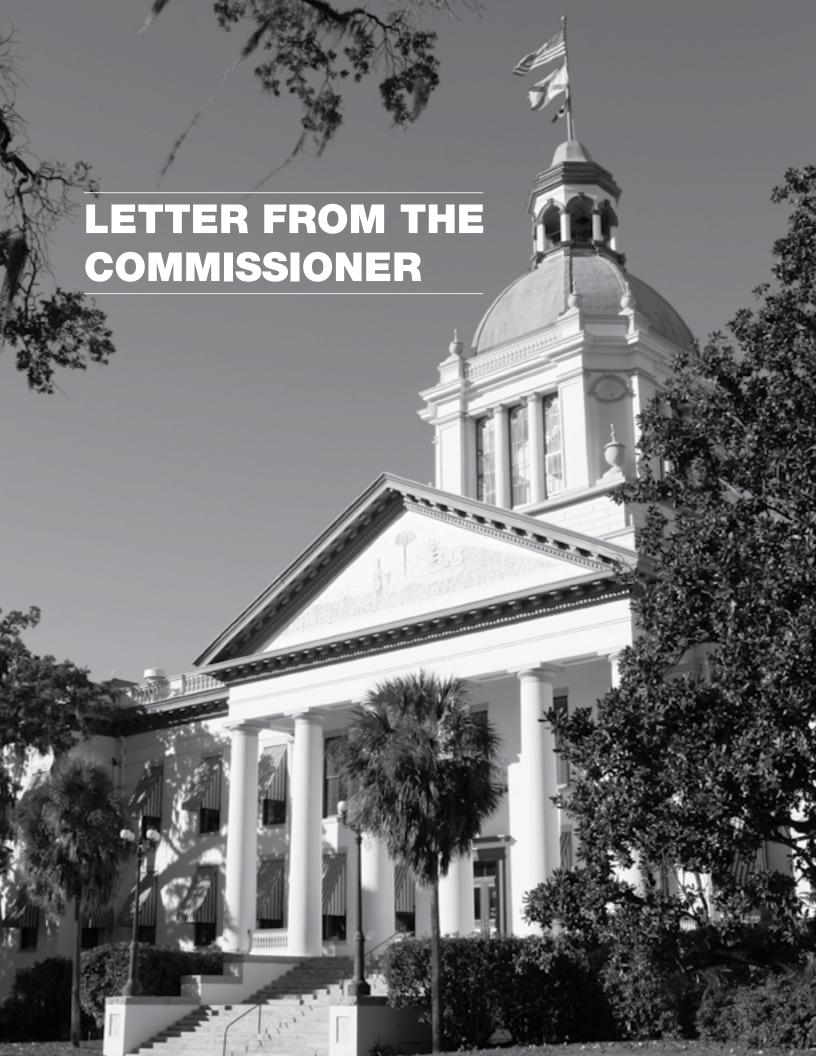
The Department ensures the safety and wholesomeness of Florida's food supply through rigorous inspection and testing programs. The Division of Food Safety monitors food from farm gate through distribution and processing to retail point of sale. Food Safety personnel regularly inspect everything from packinghouses to grocery stores, and the division's labs perform thousands of sophisticated analyses of food samples each year. The division continues to monitor dietary supplements for danger-

ous ephedra alkaloids, candy for lead, and dried fruits and vegetables for undeclared sulphites. Food safety personnel ensure that potentially contaminated food products are removed from store shelves. This year, inspections led to several recalls of tomatoes, cilantro, and other products that were found to be contaminated with salmonella.

Another of the Department's responsibilities is conserving and protecting the state's agricultural and natural resources. The Division of Forestry fights wildfires and manages State Forests for multiple uses, including timber, wildlife habitat, and recreation. The Division of Plant Industry works to control insect pests that threaten Florida's native and commercially grown plants. Insect pests of special concern right now include the emerald ash borer, an exotic beetle highly destructive to ash trees, and redbay ambrosia beetle, the primary vector of laurel wilt, a disease that kills redbay trees, sassafras, and avocados. Noxious weeds are another environmental threat that the Department is working to manage. This year the Division of Forestry worked to help private landowners tackle cogongrass, an aggressive weed that displaces native plants and wildlife.

The Department is Florida's lead agency for consumer protection. The Division of Consumer Services is the state's clearinghouse for consumer complaints and information. It is responsible for regulating various business industries operating in Florida and conducts investigations of unfair and deceptive trade practices. In addition, the division functions as the U.S. Consumer Product Safety Commission's liaison in Florida regarding product recalls, inspections, and investigations. The Division of Standards protects consumers from unfair and unsafe business practices across a wide range of products, including gasoline, brake fluid, antifreeze, liquefied petroleum gas, amusement rides, and weighing and measuring devices.

Supporting and promoting agriculture, preserving the environment, assuring the safety of food, and protecting consumers—these are the Department's vital functions. To carry them out, it takes a diverse and dedicated staff that includes chemists, biologists, foresters, firefighters, law enforcement officers, accountants, and even artists. This annual report will tell you more about the Department's daily activities and its many accomplishments.



ANNUAL REPORT 2009 / 2010

LETTER FROM THE COMMISSIONER



Fiscal year 2009-2010 was another eventful year at the Florida Department of Agriculture and Consumer Services. We dealt with the usual challenges—wildfires, droughts, and outbreaks of plant and animal diseases. But we were also beset by difficulties that were unprecedented—record cold temperatures and a massive oil spill in the Gulf of Mexico.

I am proud of the way our Department responded to this year's

crises big and small. I am also proud of our proactive efforts to protect Florida agriculture and consumers not just now but in the future.

In January 2010, an Arctic cold front moved through the state, resulting in nearly two weeks of below-freezing temperatures. In response, I asked the Governor to ease highway restrictions for commercial vehicles transporting vulnerable crops to processing sites. That way, growers were able to harvest and transport crops as quickly as possible to help lessen their losses.

In the aftermath of the freeze, our Department worked to assess damages so that affected growers could seek federal assistance. Many crops were only delayed by the cold, and our marketing staff made sure we got the word out to consumers.

During the freeze, growers irrigated extensively, hoping to save their crops by coating them in protective layers of ice. In the months that followed, our Office of Agricultural Water Policy worked to secure funds to help growers in the area build tailwater recovery systems (systems that catch runoff from fields and return it for use in irrigation). These systems will greatly reduce grower dependence on groundwater sources.

On Tuesday, April 20, 2010, the Deepwater Horizon offshore oil-drilling platform exploded in the Gulf of Mexico near Louisiana. On April 22, the Deepwater Horizon sank, leaving the well gushing at the sea floor. It was the start of what would turn out to be the largest offshore oil spill in United States history.

LETTER FROM THE COMMISSIONER

Many divisions within the Department played a role in responding to the spill. The Division of Forestry sent personnel to help out at the Florida Emergency Operations Center and provided aircraft and pilots to conduct reconnaissance flights along the coast of the Panhandle. The Division of Food Safety actively developed and implemented protocols to ensure that toxic compounds related to the oil spill were not entering the food supply.

The Division of Marketing and Development set up a seafood hotline with information about fishing closures and other Gulf safety issues. The division also produced television spots aiming to quell misinformation and let the public know that Florida seafood was unaffected by the spill, safe to eat, and in plentiful supply.

The oil spill threatened Florida's energy, tourism, and fishing industries, and in its wake I continued to forge ahead with my efforts to promote the production of renewable energy from biomass. Florida has the greatest potential for biomass production in the country, and the technology exists to convert our natural resources into clean, renewable energy. I held my fifth annual "Farm to Fuel" Summit in July of this year.

In all areas, our Department strived to offer the highest level of service, despite the climate of budget cuts and economic hard times. At the beginning of the year, our Division of Licensing faced an enormous backlog of pending applications for new concealed weapons licenses. Staff put in overtime hours to work through the backlog, and by the end of the year we were able to issue most licenses within one to two months of application.

Florida achieved an important land management milestone during this fiscal year. A record number of acres both on State Forests and private land underwent prescribed burning. Prescribed burning is vital to controlling wildfires. It also improves wildlife habitat, controls diseases, insects, and invasive species, and assists in the recycling of nutrients into the soil.

These are just a few of the Department's accomplishments. This annual report will tell you about many more. I am proud to have served as your Commissioner of Agriculture for these past 10 years. It has been a privilege to serve the citizens of Florida.

Charles H. Bronson

Commissioner of Agriculture

4 ANNUAL REPORT 2009 / 2010

TABLE OF CONTENTS

Supporting Florida Agriculture

Statistical Reporting
Citrus
Vegetables
Greenhouse and Nursery Production16
Berries and Melons
Field Crops
Other Fruits and Nuts
Dairy
Cattle and Calves
Poultry and Eggs
Honey
Fruit and Vegetable Inspection18
Agricultural Dealer's Licenses
State Farmers' Markets
Livestock and Domestic Animals
Animal Disease Control
Animal Disease Traceability
Animal Movement
Health Certificates
Carcass Hauler Permits
Livestock Haulers Permits
Marks and Brands Program
Poultry
Avian Influenza
Pullorum Disease Program Work
Other Poultry Program Work
Cattle
Brucellosis
Tuberculosis
Transmissible Spongiform Encephalopathies27
Bovine Spongiform Encephalopathy (Mad Cow Disease)
Johne's Disease
Small Ruminants (Sheep and Goats)
Tuberculosis
Brucellosis
Scrapie
Equine
Contagious Equine Metritis
Equine Infectious Anemia
Equine Piroplasmosis
Arboviruses

Eastern Equine Encephalomyelitis	
West Nile Virus	32
Swine	
Classical Swine Fever	
Garbage Feeders	
Swine Brucellosis and Pseudorabies (Aujeszky's Disease)	
Reportable Animal Disease Tracking	
Cervidae	
Chronic Wasting Disease	
Companion Animal and Small Animal Programs	36
Emergency Management	36
Diagnostic Laboratories	38
Bronson Animal Disease Diagnostic Laboratory	41
Live Oak Animal Disease Diagnostic Laboratory	42
Feed, Seed and Fertilizer	42
Bureau of Agricultural and Environmental Laboratories	43
Bureau of Compliance Monitoring	43
Office of Agricultural Water Policy	44
Best Management Practices	44
State and Federal Cost-Share Programs	44
BMP Implementation Follow-up	45
Field Staff and Technical Services	45
Regional Partnerships	45
Mobile Irrigation Laboratories	46
Ombudsman Assistance	47
Agricultural Law Enforcement	47
Bureau of Uniform Services	48
Interdiction Stations	48
Bureau of Investigative Services	49
Bureau Mission	50
Bureau Responsibilities	50
Domestic Security	51
Accomplishments	51
Arrests, Notices, Warnings, Reports	52
Restitution/Recovery/Seizure/Reimbursement	52
Bureau of Administrative Services	52
Reaccreditation	
Bureau Accomplishment	53
Domestic Marijuana Eradication Program	
Property and Evidence	
Training	
Records Management	
Recruiting	55

6 ANNUAL REPORT 2009 / 2010

Social Networking	
Plant Protection, Inspection and Certification	55
Boca Raton Mediterranean Fruit Fly Response Program	56
Citrus Black Spot	57
Mikania micrantha	58
Working Groups	58
Pest Eradication and Control	59
Abandoned Grove Initiative	60
Commercial Citrus Survey	60
Psyllid Trapping and Aerial Spraying for Asian Citrus Psyllid/Greening	61
Regulatory	61
Public Relations and Education	63
Citrus Budwood Registration	63
Methods Development and Biological Control	
Rearing Programs for Biological Control Agents	
Caribbean Fruit Fly	
Diaprepes Root Weevil	
Diaprepes Root Weevil and Parasite Quadrastichus haitiensis	
Imported Fire Ant (Solenopsis invicta) and Phorid Flies (Pseudacteon sp.)	
Pink Hibiscus Mealybug Biological Control Program	
Tropical Soda Apple Biological Control Program	
West Indian Fruit Fly Biological Control Program	
Cycad Scale	
Asian Citrus Psyllid	
Citrus Leafminer	
Cactus Moth	
Technique Development Laboratory	
Florida Accelerator Services and Technology (FAST)	
Caribbean Fruit Fly Research and Activities	
Training and Compliance	
Fumigation/Miscellaneous Activities	
Plant and Apiary Inspection	
Plant Inspection	
Commercial Citrus Nursery Inspection Program	
Gladiolus Rust	
Violations, Stop-Sale and Hold Orders	
Caribbean Fruit Fly Certification Program	
Boll Weevil Eradication	
Imported Fire Ant Certification Program	
Aquatic Harvest Permitting	
Native Flora Harvesting Permitting	
Compliance Agreements	
Apiary Inspection	
- L - A	

Registered Florida Beekeepers	
Honey Bee Colonies in Florida	. 76
Commercial Beekeeping	
Recreational Beekeeping	. 77
Pollination, Fee-Based Model	. 77
Honey	. 78
Apiary Research Activities	. 78
Varroa Control	. 78
Israeli Acute Paralysis Virus (IAPV) Control	. 78
Honey Value	
Queen Replacement Rates	. 79
African Honey Bee	. 79
Public Outreach	
Entomology, Nematology and Plant Pathology	
Entomology	
Significant New Arthropod Records	. 80
Acari	. 80
Coleoptera	. 80
Diptera	. 81
Hemiptera	. 81
Florida State Collection of Arthropods	. 83
Florida Biological Control Laboratory	. 83
Biological Control Research and Containment Laboratory	. 83
Fruit Fly Identification Laboratory (FFIL)	. 84
Advanced Diagnostic Laboratory	. 85
Botany	. 86
Citrus Germplasm Introduction Program (CGIP)	. 87
Introducing Six New Varieties	. 87
New Germplasm and Budstick-Sprouting	. 87
STG Equipment Upgrades	. 88
Released 26 New Varieties	. 88
Member of the National Citrus Clean Plant Network	. 88
Nematology	. 89
Plant Pathology	. 92
Laurel Wilt Threat to Florida Avocadoes	. 92
Gladiolus Rust	. 94
Discovery of Citrus Black Spot Disease near Immokalee	. 94
Citrus Canker Developments	. 95
Annual Meeting of the American Phytopathological Society	. 96
California Oak Mortality Task Force	. 96
Other Highlights	
Presentations and Lectures	
Visitors to Plant Pathology Section	97

1 | ANNUAL REPORT 2009 / 2010

Diseases New to Florida	
Pathogen Discoveries	. 98
Cooperative Agricultural Pest Survey	. 98
Potato Cyst Nematode Survey	. 99
Laurel Wilt/Redbay Ambrosia Beetle Survey	100
Small Grains Survey	101
Light Brown Apple Moth Survey	
Solid-Wood Packing Material Survey	
Emerald Ash Borer Survey	
Oxycarenus hyalinipennis Survey	
Giant African Land Snail Survey	
Mikania micrantha Survey	
Blue Gum Chalcid Wasp Survey	
Domestic Security and Emergency Preparedness	
Promoting Florida Agriculture	
1 Tomothig Florida Agriculture	
Florida Agricultural Promotional Campaign	111
"Fresh from Florida" Magazine	
Xtreme Cuisine Cooking School	
Agriscience Education Leadership Program	
"Fresh From Florida Kids"	
African-American Health and Nutrition Campaign	
Hispanic Health and Nutrition Campaign	
Culinary Promotions	
Advertising Campaigns	
Social Media Outreach	
Retail Campaigns: Global Grid and Winners Circle	
Trade Events	
International Marketing	
Cattle Trade Missions	
Florida Thoroughbred Trade Missions	
Seafood and Aquaculture Marketing	
TV Consumer Shows	
SUSTA Activities	
South Beach Wine and Food Festival	
Public Relations	
Fishery Trade Leads	
International Boston Seafood Show	
"Sea Notes" Industry Newsletter	
Florida Seafood Seasons Advisory	
Promoting Seafood and Aquaculture on the World Wide Web	
Industry Support During Gulf Oil Spill	
madali y aupport duning dun on apili	123

Bureau of Education and Communication	123
Florida Market Bulletin	124
Video and Radio	124
Graphics	125
Web Development	126
Food Distribution	126
WIC/Farmers' Market Nutritional Program	127
Emergency Response	127
Ensuring a Safe, Wholesome Food Supply	
Division of Food Safety	129
Food and Meat Inspection	130
Chemical Residue Laboratories	138
Pesticide Residues	
Food Laboratories	140
Food Analyses	140
Summary of Regulatory Pathogen Analyses	
Summary of Water/Ice Analyses (Microbiological)	
ISO 17025 Accreditation	
Information Technology	
National Databases	
Education and Training	
Responding to Food Emergencies and Terrorism	
Division of Dairy Industry	
The Florida Dairy Industry	
Dairy Inspections	
Monitoring Antibiotics in Milk	
Division of Aquaculture	
Aquaculture Certification Program	
Oyster Culture and Shellfish Resource Development Program	
Restoring Public Oyster Reefs	
Shellfish Harvesting Area Classification and Management Program	
Shellfish Processing Facility Program	
BP Deepwater Horizon Oil Spill	
Technical Support Programs	
Conserving the Natural Environment	
Division of Agricultural Environmental Services	153
Bureau of Agricultural Environmental Laboratories	153
Realignment of Laboratory Operations	153

18 ANNUAL REPORT 2009 / 2010

Pesticide Laboratory Air Monitoring Developments	
Instrumentation and Analysis Enhancements	
Bureau of Compliance Monitoring	155
Re-registration Eligibility Decisions (RED) for Soil Fumigant Pesticides	155
Aldicarb Use and Registration	
Risk-based Inspections	156
National Pollutant Discharge Elimination System (NPDES) program	156
Worker Protection and Farm Safety	156
Pesticide Certification	156
Pesticide Compliance	156
Bureau of Pesticides	157
Pesticides and Application Techniques to Fight Citrus Pests	157
Clean Water Act Permitting Requirements	157
Mosquito Control Traps to Control Dengue Fever	158
Registration Fees for Pesticide Regulatory Programs	158
Pesticide Brand Registrations	158
Entomology and Pest Control	158
Division of Forestry	159
Forestry Programs	159
Wildfires	159
Forest Protection	160
Land Acquisition	164
Natural Resource Management	165
Andrews Tree Nursery	165
Technical Assistance	166
Forest Health	167
Forest Inventory and Utilization	167
American Recovery and Reinvestment Act	168
Field Operations	168
Hydrology	168
Forest Resource Planning and Support Services	170
Information Technology	170
Planning	172
Construction	172
Equipment	172
Honor Guard	.174
Florida Center for Wildfire and Forest Resource Management Training	.174
Safeguarding Florida's Consumers	
Division of Consumer Services	176
Consumer Assistance Call Center	176
Consumer Complaints	177

Motor Vehicle "Lemon Law"	
Regulated Programs	178
Business Opportunities	
Dance Studios	179
Game Promotions	179
Health Studios	179
Intrastate Moving	179
Motor Vehicle Repair Shops	180
Do Not Call	180
Pawn Shops	180
Sellers of Travel	180
Solicitation of Contributions	181
Telemarketing	181
Professional Surveyors and Mappers	181
Investigations	182
Consumer Education	182
Division of Standards	183
Petroleum Inspection	183
Fair Rides Inspection	185
Liquefied Petroleum Gas Inspection	186
Weights and Measures	188
Division of Licensing	189
Overview	
Benchmarks and Achievements	190
Improving Levels of Service	193
Ensuring Employee Excellence	
Training and Development Section	196
Training	
Education	
Awards	
Business Management Initiatives	
AGMIC - Information Technology	
Disaster Recovery Planning and Testing	
Technology Policy Compliance Project	
New Storage Area Network and Replication Software/Hardware Purchase	
Replacement of the Sun 6900 Enterprise Server	
Office of Inspector General	
Auditing Section	
Investigation Section	



Statistical Reporting

Reliable information is essential to making production, marketing, and policy decisions for the agricultural community. The Florida Department of Agriculture and Consumer Services shares in a cooperative federal/state program responsible for collecting and disseminating Florida agricultural statistics. Information on the state's major commodities is gathered through onsite producer surveys, voluntary mail questionnaires, and telephone and personal interviews. Statistics compiled from these data are available in over 200 reports issued annually.

In the past year, the Florida Agricultural Statistics Service staffed an informational booth at industry trade shows for citrus, cattle, and nursery producers as part of its public relations efforts. The booth allowed the service to promote its role in the industry and increase the visibility of its reports.

Citrus

An initial citrus production forecast is issued in October and modified monthly through the citrus season based on fruit size measurements and observations on drop rate. These forecasts are based exclusively on objective data obtained directly by field personnel, including an extensive limb count survey conducted from July to September to estimate fruit set per tree. Florida's citrus growers produced an estimated 133.6 million boxes of all oranges and 20.3 million boxes of grapefruit in the 2009-2010 season.

Cash receipts for all citrus crops sold in 2009 totaled \$1.52 billion, compared to

\$1.75 billion in the 2008 season. Citrus accounted for 21.4 percent of all cash receipts in 2009.

Vegetables

Florida growers harvested fresh market vegetables from 224,000 acres in 2009. Cash receipts for all vegetables amounted to \$1.64 billion, which amounted to 23.2 percent of all cash receipts in 2009. Tomatoes, peppers, snap beans, sweet corn, potatoes, and cucumbers accounted for the largest amount of sales among vegetable crops.

Greenhouse and Nursery Production

The total value of Florida greenhouse and nursery production exceeds \$1.67 billion.



Berries and Melons

Strawberry production for 2009 was up from the year before, resulting in cash receipts of \$313.6 million compared to \$249.4 million in 2008. Lower production for watermelons resulted in a decrease in total crop value to \$135.8 million in 2009.



Field Crops

Sugarcane production was down from the previous year, with total cash receipts decreasing to \$403.1 million in 2009. Cash receipts for peanuts decreased to \$69.6 million, due to lower production in 2009. Higher prices for cotton produced cash receipts of \$33.1 million in 2009, compared to \$37.7 million in 2008.

Other Fruits and Nuts

Receipts for other fruits and nuts, such as avocados, blueberries, pecans, and miscellaneous fruit and nuts, at \$117.6 million, were up from \$98.7 million in 2008.

Dairy

Cash receipts from marketings of Florida milk in 2009 totaled \$350 million, down from \$464 million in 2008. In 2009, the peak price of replacement milk cows was \$1,600 per head in January. The annual average farm-gate price for milk in Florida was \$16.90 per hundredweight in 2009, down from \$22.60 in 2008. Production in Florida of low-fat ice cream was 23,921,000 gallons, down from 24,048,000 gallons in 2008.

Cattle and Calves

All cattle and calves on Florida farms and ranches as of January 1, 2010, including dairy cattle, totaled 1,720,000 head, up 20,000 from 2009. The three top-ranking counties for cattle were Okeechobee, Osceola, and Polk counties. Beef cows in Florida totaled 958,000 head, up 16,000 head from 2009. Nationally, Florida ranked 10th in beef cows and 18th in total cattle. Calves born during 2009 totaled 900,000, up 20,000 head from 2008. Cash receipts from cattle and calf marketings were \$375 million, down from \$405 million in 2008. The average annual beef price of cattle marketed in Florida in 2009 was \$67.30 per hundredweight, down from \$70.70 per hundredweight in 2008. The average price for calves in 2009 was \$93.70 per hundredweight, down from \$98.90 per hundredweight in 2008.

Poultry and Eggs

The total value of Florida egg production in 2009 was \$152.6 million, down from \$234.5 million in 2008. The average annual price for eggs (hatching and table eggs, combined) was 68.6 cents per dozen, down

from 102 cents per dozen in 2008. The value of broilers produced in Florida during 2009 totaled \$115 million, down from \$173 million a year earlier. The average annual price of broilers in 2009 was 46 cents per pound, unchanged from 2008.

Honey

Florida was fifth in the nation in honey production in 2009 (behind North Dakota, South Dakota, California, and Montana) with 10.2 million pounds valued at \$14.1 million. There were an estimated 150,000 colonies in the state in 2009 with an average honey yield of 68 pounds per colony, 11 pounds per colony less than in 2008.

Fruit and Vegetable Inspection

The Division of Fruit and Vegetables serves as a third party to provide on-request inspections for the purpose of certifying the quality and condition of produce shipped in and out of the state to national and international markets. The Department's services, provided in cooperation with the U.S. Department of Agriculture's Agricultural Marketing Service, enhance the marketability of fruit and vegetables produced and imported into Florida. Committed to meeting the needs of Florida's fruit and vegetable industries through fiscally responsible quality assurance and technical assistance services, the division constantly strives to find innovative and cost-effective methods of inspection.



Agricultural Dealer's Licenses

The Department assisted Florida producers in reducing their financial risk through its administration of Florida's Agricultural License and Bond Law. This law ensures that Florida producers of agricultural products covered by the license and bond provisions receive proper accounting and payment for their products.

During fiscal year 2009-2010, the Department issued 4,982 licenses and collected \$868,781 in license fees and delinquent penalties.

The Department received 215 claims against agricultural dealers in this fiscal year. Claims against dealers in agricultural products must be filed within six months from the date of sale and total a minimum of \$500. There were 235 claims settled in the past year resulting in the recovery of \$1,891,155 on behalf of Florida agricultural dealers.

The Department closely monitors dealers to make sure they maintain adequate bonds to protect Florida growers. Department associates conducted 848 compliance audits of dealers' records during the year. These audits are designed to ensure that bond amounts are maintained, to determine whether unlicensed dealers were exempt from license and bond requirements, to determine if prospective licensees were conducting business in a manner requiring licensure, and to document violations of Department enforcement actions.

The Department opened 206 new enforcement cases, closed 189 cases, and collected \$95,351 in administrative fines during the 2009-2010 fiscal year. Enforcement actions resulted in an additional \$2,004,294 of bond protection for Florida growers.



State Farmers' Markets

The Bureau of State Farmers' Markets manages four major program initiatives: State Farmers' Markets; Community Farmers' Markets; Women, Infants, and Children/Farmers' Markets Nutritional Program (WIC/FMNP); and County Fair Permitting.

State Farmers' Markets tenants and clients

marketed \$521 million in wholesale value of produce, dairy, frozen seafood, and value-added products during fiscal year 2008-2009. The bureau operated 13 wholesale farmers' markets during the fiscal year. These markets offer a mix of wholesale and retail produce and attendant services such as produce refrigeration, truck weigh scales, farm supply, restaurants, and produce brokerage sales as well as produce and freight shipping companies. At year's end the available space for market tenants was 79 percent leased for a total of more than 1.6 million square feet of warehouse, office, and parking space.

Hurricane repair projects on the affected state market sites have made major strides in the recovery from the devastating storms of 2004 and 2005. The last site with unrepaired damage from the 2004 storms was the Fort Pierce State Farmers' Market, and repairs have now been completed. The Fort Pierce hurricane reconstruction project expenses were \$17.9 million. There are two remaining with unrepaired damage as a result of the 2005 hurricanes. The Immokalee State Farmers' Market hurricane reconstruction project has an anticipated maximum total project cost of \$10 million and is currently out for bid having prevailed in the Department's formal appeal with FEMA. It is anticipated that this project site will be completed within 12 months. The remaining site requiring repairs due to 2005 hurricane damage is Florida City. The Department currently has two buildings on appeal with FEMA with an estimated repair cost of \$2 million.

More than 200 farmers operating at over 25 community retail markets participated in the Women, Infants, and Children/Farm-

ers' Market Nutrition Program (WIC/FMNP) this year. By promoting the consumption of fresh fruits and vegetables to WIC mothers and children, this program encourages a healthy diet while boosting farmers' sales at participating locations. The program was offered in 16 counties and provided over 30,000 WIC recipients with information about proper nutrition and the importance of fresh fruits and vegetables in their daily diets.

The County Fair Permitting Section issued permits for 52 fairs. Approximately \$200,000 was distributed to these fairs and other public organizations as agricultural premium and awards reimbursements. These awards encourage participation by Florida's youth in agricultural programs.

The popularity of retail farmers' markets continues to grow in Florida. There are more than 100 retail markets promoted on the Department's web site.

Livestock and Domestic Animals

The Division of Animal Industry enforces state animal health regulations to prevent, control, and eradicate infectious or communicable diseases of livestock and domestic animals. The division also works to protect the state from animal pests and diseases that threaten economic and public health. Through the efforts of the Bureau of Animal Disease Control and Bureau of Diagnostic Laboratories, the division:

 Monitors livestock and poultry on farms and ranches and at animal concentration points for disease status and carries out



intensive animal disease investigations utilizing state-of-the-art laboratory testing for the diagnosis of domestic diseases, as well as emerging and potential foreign animal diseases.

- Works with producers and other cooperators to control animal diseases to ensure the health of the animal industries and to ensure safe and wholesome animal food products.
- Regulates, administers, and enforces laws relating to animal health to prevent the introduction of diseased animals into Florida and to prevent the spread of diseases within the state.
- Monitors companion animal health issues, provides consumer protection assistance, and supports rule and legislation development to ensure the overall health of small animal populations and industries in Florida.
- Provides information to livestock and poultry producers, private practitioners, and the public about regulatory requirements and Best Management Practices through news releases, brochures, the Internet, and personal visits.

Develops, implements, and tests emergency response plans in the event of outbreaks of foreign animal diseases and other natural or manmade disasters affecting animals and animal food production.

Emergency management is also a responsibility of the division. Eighteen Emergency Support Functions (ESFs) were established in the Florida Comprehensive Emergency Management Plan. Each ESF is headed by a lead or primary agency or organization, which was selected based on its authorities, resources, and capabilities in that functional area. The Division of Animal Industry is the primary lead responder for ESF-17, which was organized to ensure rapid response to animal and agricultural needs in a disaster or emergency scenario.

Animal Disease Control

The Department, through the Division of Animal Industry, is responsible for administering the state's animal disease prevention, control, and eradication programs. In cooperation with the U.S. Department of Agriculture (USDA), the Florida Department of Health (FDOH), and the Florida Fish and Wildlife Conservation Commission (FWC), the Department has moved beyond traditional perceptions of animal disease control and eradication by developing new programs to address public health and wildlife issues and major economic impacts. The re-emergence of brucellosis and tuberculosis and intermittent outbreaks of Equine Piroplasmosis, Vesicular Stomatitis, and Contagious Equine Metritis in other states during the past year emphasize the necessity of having a strong, active animal disease monitoring program in place with an open line of communication with public

officials. The division also monitors health concerns in a wide variety of exotic animal collections. Concerns regarding exotic and non-traditional species of animals may be initiated by the facility, other agencies, or other interested parties, in addition to the division's routine monitoring practices. Primates and elephants are monitored and sometimes quarantined for tuberculosis, and birds and other exotic animals have been occasionally affected with foreign or zoonotic diseases.

Rather than perceiving disease control and eradication programs as bureaucratic obstacles, the public is demanding that more be done to protect the nation's animal-origin food supply and companion livestock.

These needs – as perceived by the producer, the consumer, and associated animal industries – will influence the overall acceptability and effectiveness of future disease control and eradication programs.

The Department's program activities take into consideration the changing face of animal industries in Florida and throughout the United States. Numerous species previously considered exotic or wildlife have straddled or crossed the line between wildlife and agriculture. Government and industry are faced with challenging learning curves in veterinary medicine and diseaserisk analysis for unfamiliar species, with few or no precedents. The Department recognizes the need to include these emerging animal industries with traditional livestock industries so they can coordinate and respond to a greater range of issues.

Animal Disease Traceability

The threat of a foreign animal disease outbreak or other animal health event in the United States is real. Unfortunately, the timing and severity of an outbreak are impossible to predict. The division continues to work with USDA to improve animal disease traceability through further development of an information system designed to enable producers and animal health officials to respond quickly and effectively to animal health events in the United States. The foundation of the system is a database of premises where livestock, poultry, and equine are held. The animal disease traceability program is a voluntary state-federalindustry partnership that will help to protect livestock, poultry, and equine owners and reduce hardships caused by an animal disease outbreak or other animal health event.



The individual animal identification component is intended to identify all agricultural animals as they come into contact with, or are intermingled with, animals other than herd mates from their premises of origin. The USDA long-term goal is to establish

a system that can identify all animals that have had direct contact with a foreign animal disease or domestic disease of concern within 48 hours of discovery. Further development of a nationwide animal identification and tracking system will help secure the health of the national herd and ensure consumer confidence.

Since 2004 Florida has entered into cooperative agreements with the USDA to implement a premises identification system and work with producers and industry groups on pilot animal identification projects. Division personnel continue to work with producers and industry leaders to develop practical approaches to meet the animal health and animal movement challenges of today's global marketplace.

As of June 30, 2010, more than 8,500 Florida premises were registered. These premises include all species of livestock and each of Florida's USDA-approved livestock auction markets. Florida was the first major cattle-producing state to have 100 percent registration of its livestock markets. It is estimated that more than 85 percent of Florida's total cattle inventory is now housed on registered premises. Across all species, the premises which have been registered represent the core of the commercial livestock industry. The inclusion of additional premises will increase the effectiveness of disaster response capabilities. The Division of Animal Industry continues to share information with and receive input from industry leaders representing all included species.

Several of Florida's major ranches have electronically identified each animal in their producing herds as well as each calf crop. Individual electronic identification

of the brood cows provides for enhanced management and recordkeeping. Individual identification of the calves allows the return of production data for management decisions and also allows the calves to be marketed as source-verified. Participating producers view the feedback of performance and health-related information as an increasingly valuable ranch management and marketing tool. The Seminole Tribe of Florida uses electronic identification and has been a leader in adopting this new technology.

The Florida Equine Passport Card program has continued to grow with 748 cards being issued during this fiscal year. Twelve states now accept the Florida Equine Interstate Passport Card, which extends the duration of the Official Certificate of Veterinary Inspection (OCVI) from the standard 30-day period to six months, for interstate movement to equine events. The negative Equine Infectious Anemia (EIA) Verification Card has also been received well by horse owners as an alternative to the paper Coggins form used for intrastate movement. During fiscal year 2009-2010, 600 EIA verification cards were issued. One of the requirements to receive either card is that the animal originates from a registered premise.

Animal Movement

The monitoring of the movement of livestock and poultry into Florida by the Official Certificate of Veterinary Inspection is the Department's first line of defense against the inadvertent importation of animal diseases. When diseases threaten livestock and poultry in other parts of the country, the Department may enact additional regulations for animals being imported into Florida, often requiring prior notification, permission, and permitting from the Department before shipments are allowed into Florida through the Agricultural Interdiction Stations.

Health Certificates

During fiscal year 2009-2010, the division processed 42,139 certificates representing more than 724,363 animals moving into or out of Florida. Beef and dairy cattle were the most numerous animals shipped, while horses accounted for the highest number of shipments moving through Florida. Other species accounting for much of the animal movement into and out of Florida were swine, goats, sheep, and exotic species. This number does not include the numerous poultry or small animal movements. All livestock transported into Florida are subject to certificate verification by Agricultural Law Enforcement officers.

Carcass Hauler Permits

The purpose of the Carcass Hauler Permits program is to prevent, control, or eradicate diseases that may be transmissible to other animals or humans. During fiscal year 2009-2010, 476 permits were issued. By June 30 of each year, individuals or businesses are required to apply for and receive a permit to haul any dead, dying, disabled, or diseased animal, any product of an animal that died other than by slaughter, or any inedible animal product not meant for human consumption.

Livestock Haulers Permits

The purpose of the Livestock Haulers Permits program is to protect owners of animals and legitimate businesses that haul livestock by improving control over livestock thefts and other illicit livestock operations. During fiscal year 2009-2010, the division issued 1,850 livestock hauler permits/tags. These permits/tags are required for each vehicle hauling or transporting livestock for hire on Florida's public roads or highways.

Marks and Brands Program

Livestock brand registration was centralized at the state level in 1945. The change from county-by-county registration was instituted to prevent duplication of brands by different owners, especially as commerce and trade increased among different parts of the state. In fiscal year 2009-2010, the division issued 210 new brand certificates, transferred 25 brands, and renewed 801 certificates. Currently, the total number of brands registered in Florida is 5,423. Branding of livestock in Florida is not required, but, if done, owners must register their brands with the state.

Poultry

Several important diseases can have a disastrous impact on the poultry industry if allowed into the state. In an effort to carry out its mission of surveillance, prevention, and control, the division conducts inspections of poultry premises, live bird markets, small animal sale markets, botanicas, fairs and exhibitions, imported birds, and backyard flocks in accordance with state rules and regulations and USDA's National Poultry Improvement Plan (NPIP). Through



these programs, information on disease control and biosecurity on the farm has been distributed throughout the state in an effort to inform the public about their role in controlling these diseases.

Avian Influenza

Due to the outbreaks of Avian Influenza (AI) H5N1 in other countries and in response to increased public concerns, Al surveillance has become a major focus for the Department and the Division of Animal Industry. An Avian Influenza State Response and Containment Plan was developed and a Poultry Emergency Disease Committee was established. Members on the committee consist of state, federal, and industry representatives. In cooperation with the USDA, the expanded Avian Influenza surveillance program now includes sample collection and inspections at botanicas, live bird markets, animal sale markets, fairs/exhibitions, backyard flocks, upland game birds, sick bird investigations, and commercial flocks.

Globally, there are many different strains of Al virus causing a variety of clinical illnesses

in poultry. Viruses can infect chickens, turkeys, pheasants, quail, ducks, geese, and guinea fowl, as well as a wide variety of other birds. Migratory birds, especially waterfowl, have been shown to act as a natural reservoir for the less-infectious strains of the disease. Al viruses can be classified into low pathogenicity (LPAI) and high pathogenicity (HPAI) based on the severity of the illness they cause. HPAI is the highly transmissible and lethal form of the disease; it spreads rapidly once established. Because some LPAI viruses can mutate into HPAI viruses, surveillance for both is extremely important. Although Florida has not detected HPAI and the United States has not detected the Asian strain of H5N1, Florida has greatly increased its scrutiny and testing of birds in all facets of the industry for the presence of this deadly strain.

In 2009-2010, Department-authorized agents tested 173 small animal sale markets, botanicas, and live markets for Al, resulting in 3,742 birds tested. Over 673 commercial poultry premises were tested and 10,151 samples were submitted for Al in accordance with the NPIP Al monitoring program. In addition to this testing, 280 sentinel birds were placed at botanicas for Al surveillance program work and 218 import verifications were performed by Department-authorized agents.

Pullorum Disease Program Work

Fowl Typhoid (FT) and Pullorum Diseases (PD), affecting chickens and turkeys primarily, are caused by *Salmonella gallinarum* and *Salmonella pullorum*, respectively. Clinical signs in chicks and poults include anorexia, diarrhea, dehydration, weakness, and high mortality. In mature birds, FT and PD signs

are decreased egg production, decreased fertility and hatchability, and anorexia and high mortality rates. If allowed to spread, these diseases can have damaging effects on the poultry industry. In conjunction with the USDA's National Poultry Improvement Plan (NPIP) program, the state tests birds for Pullorum Typhoid (PT) and other deadly contagious poultry diseases.

A total of 374 NPIP program flock inspections were conducted during fiscal year 2009-2010. At these NPIP premises, there were 8,648 birds tested for PT and 2,640 birds tested for Al during this fiscal year. Department-authorized agents continue to inspect and test for PT and Al on poultry coming into fairs for exhibition. During 2009-2010, the Department inspected 8,840 birds at 56 fairs. Authorized agents tested 4,229 of the birds exhibited at the fairs for PT and 782 for Al.

Other Poultry Program Work

Monitoring and surveillance activities for *Mycoplasma gallisepticum* (MG), *Mycoplasma synoviae* (MS), and AI on commercial poultry breeding flocks were also continued. During fiscal year 2009-2010, 124 flocks were tested and 5,308 samples were submitted to the division's diagnostic laboratories for MG and MS testing.

The division continues to conduct quarterly hatchery inspections at commercial egg, meat, and turkey premises in accordance with the NPIP. This year, 11 inspections were performed and 396 samples were submitted to the state diagnostic laboratories. The division also investigates all sick bird and unusual dead bird reports and (when possible) takes samples for testing

for Avian Influenza and Pullorum Typhoid. During fiscal year 2009-2010, the Department conducted 71 sick bird investigations representing 199 birds being tested for Al. Department inspectors also conducted routine inspections of dead bird disposal methods at commercial poultry farms. During the 2009-2010 fiscal year, 361 such inspections were conducted.

The Poultry Best Management Practices (BMPs) Quality Assurance Program in the Suwannee River Water Management Area was implemented in 2001. Currently, 199 poultry farms are enrolled in the program and inspected by division staff.

The division maintains a poultry database for permitting all poultry and eggs imported into the state or transshipped through Florida to other countries. During fiscal year 2009-2010, 1,678 import permits and 1,203 transshipment permits were issued, representing 14,521,964 live birds and 33,688,783 dozen hatching eggs.

Cattle

During the 2009-2010 fiscal year, 421,149 cattle were inspected at livestock markets.



Brucellosis

Brucellosis is a contagious, costly disease of ruminant animals that also affects humans. Although brucellosis can attack other animals, its main threat is to cattle, bison, and swine. The disease is also known as contagious abortion or Bang's disease. In humans it is known as undulant fever because of the severe intermittent fever accompanying human infection, or Malta fever because it was first recognized as a human disease on the island of Malta. The disease is caused by a group of bacteria known scientifically as the genus Brucella. Three species of *Brucella* cause the most concern: B. abortus, principally affecting cattle and bison; B. suis, principally affecting swine and reindeer but also cattle and bison; and B. melitensis, principally affecting goats but not present in the United States. In cattle and bison the disease currently localizes in the reproductive organs and/or the udder. Bacteria are shed in milk or via the aborted fetus, afterbirth, or other reproductive tract discharges.

There were 242 herds representing a total of 43,026 cattle tested in the field for brucellosis during the fiscal year, with no reactors. An additional 186,314 cattle were tested at slaughter with 16 positive tests. None of the animals tested positive for *B. abortus*, and the state maintains the classification of Class Free. At livestock markets 667 cattle were tested, with none found to be infected. During the same period 56,706 cattle were vaccinated against brucellosis.

Tuberculosis

Tuberculosis (TB) is a contagious disease of both animals and humans. It is caused by

three specific types of bacteria that are part of the Mycobacterium group: *Mycobacterium bovis*, *M. avium*, and *M. tuberculosis*. Bovine TB, caused by *M. bovis*, can be transmitted from livestock to humans and other animals. No other TB organism has as great a host range as bovine TB, which can infect all warm-blooded vertebrates. *M. avium* can affect all species of birds, as well as hogs and cattle. *M. tuberculosis* primarily affects humans but can also be transmitted to hogs, cattle, and dogs.

Last year in Florida, 74 herds were tested for tuberculosis. Within these herds 5,500 head of cattle were tested and no cattle were found to be infected. Surveillance sampling of tuberculosis-like lesions in slaughter cows yielded no positive animals. In the fall of 2009, the division was notified by USDA that 123 head of tuberculosisexposed cattle had entered Florida during the summer of 2008. During the response to locate and identify the exposed animals and test 4,574 contact animals, division personnel put in over 2,000 hours and traveled 13.000 miles. No infected animals were identified and Florida's Accredited Free Status was not affected.

Transmissible Spongiform Encephalopathies

Transmissible Spongiform Encephalopathies (TSE), or prion diseases, are rare forms of progressive neurodegenerative disorders that affect both humans and animals and are caused by agents that produce changes in the brain. TSE typically have incubation periods ranging from months to years before symptoms become apparent. No conventional serologic test can identify TSE-infected animals, and so TSE are usu-

ally identified from the brain tissue of dead animals. There is no vaccine or cure for these diseases, and once symptoms appear, TSE are invariably fatal.

The TSE family of diseases includes: Bovine Spongiform Encephalopathy (BSE); scrapie, which affects sheep and goats; Transmissible Mink Encephalopathy (TME); Feline Spongiform Encephalopathy (FSE); Chronic Wasting Disease (CWD) of deer and elk; and in humans, kuru, both classic and variant Creutzfeldt-Jakob Disease (CJD and vCJD), Gerstmann-Straussler-Scheinker syndrome, and fatal familial insomnia. TSE have also been reported in captive exotic ruminants, and in exotic and domestic cats. The agent isolated from several of these cases is indistinguishable from BSE in cattle, suggesting the occurrence of TSE in these species resulted from BSE-contaminated feed.

Bovine Spongiform Encephalopathy (Mad Cow Disease)

Bovine Spongiform Encephalopathy (BSE), widely referred to as "mad cow disease," was first diagnosed in 1986 in Great Britain. BSE was discovered in Canada in 2003, in Washington State in 2004, in Texas in 2005, and in Alabama in 2006. The BSE-infected cow from Washington State was later found to have originated from a Canadian herd. These isolated cases generated a rapid response from state and USDA officials, and resulted in new control, testing, and surveillance programs designed to rule out and prevent further cases in U.S. herds. The Department continues to work with federal and state partners to conduct surveillance and to prevent the introduction of BSE from foreign sources. Federal funding for en-

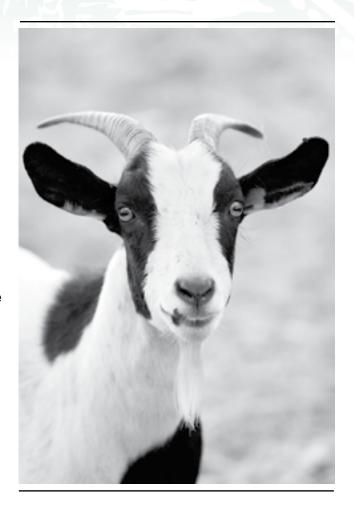
hanced surveillance ended in December 2006 with future testing limited to suspect cases.

Johne's Disease

Johne's disease is a contagious, chronic, and usually fatal infection that affects primarily the small intestine of ruminants. All ruminants are susceptible to Johne's disease. Johne's disease is caused by Mycobacterium paratuberculosis, a hardy bacterium related to the agents of leprosy and tuberculosis. The disease is worldwide in distribution. Signs of Johne's disease include weight loss and diarrhea with a normal appetite. Several weeks after the onset of diarrhea, a soft swelling may occur under the jaw (bottle jaw). Bottle jaw, or intermandibular edema, is due to protein loss from the bloodstream into the digestive tract. Signs are rarely evident until two or more years after the initial infection, which usually occurs shortly after birth. Animals are most susceptible to the infection in the first year of life.

As of June 30, 2010, the Florida Voluntary Johne's Program had 78 dairy and beef operations enrolled. For fiscal year 2009-2010, the Live Oak Diagnostic Laboratory conducted 9,926 tests.

As of December 31, 2008, federal funding for the Johne's Program ended. The Johne's Dairy Demonstration Project has also been discontinued due to lack of funding. Johne's testing has been steadily decreasing following elimination of federal funding. Division personnel will continue to work with producers in developing and implementing herd plans to control this disease.



Small Ruminants (Sheep and Goats)

During fiscal year 2009-2010, the Department inspected 9,205 small ruminants at livestock markets and 23,768 sheep and goats at small animal sale markets. Division staff also inspected 16,574 goats and sheep on farms and other assembly points.

Tuberculosis

Tuberculosis (TB) in goats and sheep, though considered a rare occurrence, is caused by one or more of the three types of Mycobacterium: *M. bovis, M. avium, and M. tuberculosis. M. bovis* infects all warm-blooded vertebrates, including humans, while *M. avian* is the species that

causes most of the infections in sheep.
The bacterium can be transmitted to humans via milk, so dairy herds should be tested. One hundred and ninety-two sheep and 530 goats were tested for tuberculosis and all were found to be negative. There are 11 certified tuberculosis-free goat herds in Florida.

Brucellosis

Brucellosis is more common in goats than in sheep, and is caused by Brucella melitensis in other parts of the world. The sign most often associated with brucellosis in goats is abortion, but not all animals that abort have brucellosis and not all brucellosis-infected animals will abort. The organism can be transmitted via blood, vaginal discharge, milk, aborted fetuses, and placenta. Because it is a zoonotic disease, the danger of human infection and economic losses to the sheep and goat industry makes this another important disease to control and eradicate. One hundred and one sheep and 487 goats were tested for brucellosis and all were found to be negative. There are 11 certified brucellosis-free goat herds in Florida.

Scrapie

Scrapie is one of a number of diseases of ruminants classified as Transmissible Spongiform Encephalopathies (TSE). Scrapie affects the central nervous system of sheep and goats, but clinical signs may not appear until the animal is five years of age or older. The USDA's Voluntary Scrapie Flock Certification Program provides participating producers with the opportunity to protect their sheep from scrapie and enhance the animals' marketability by having the herd certified scrapie-free. Florida now has 20

flocks/herds participating in this program, with eight of those flocks/herds certified scrapie-free. Under USDA Animal and Plant Health Inspection Service (APHIS) rules and regulations, the Scrapie Eradication Uniform Methods and Rules, and Florida Rule 5C-29, all sheep and goats in Florida are required to be individually identified with an official USDA-APHIS-approved tamper-resistant individual animal identification tag or tattoo number. Five hundred and twenty three premises registered under this program for fiscal year 2009-2010.



Equine

Contagious Equine Metritis

Contagious Equine Metritis (CEM) is a highly contagious reproductive disease that can affect all equids and is caused by the bac-

terium *Taylorella equigenitalis*. The infection can result in short-term infertility in mares that is sometimes associated with a vaginal discharge and, rarely, abortion. Mares can become inapparent carriers of the bacterium in their reproductive tracts and can shed the organism into the environment and transmit it through subsequent breeding. Stallions do not develop clinical signs but can carry the organism on their genitalia for years and spread the disease by breeding susceptible mares.

Currently, there are at least 25 countries and territories where CEM is considered endemic, including a number of the member states of the European Union. CEM is a serious venereal disease because it is highly contagious. There is no vaccine against CEM, but there are ways to detect infected horses and to rid infected stallions and mares of the bacterium via treatment and testing protocols.

CEM is considered an exotic disease in the United States, which means it is not found in the native horse population; however, there was an outbreak of CEM in the United States which began when the CEM organism was detected in a domestic stallion during routine testing in Kentucky in December 2008. During the subsequent investigation 960 horses in the United States were determined to have been exposed, and 27 horses tested positive for the CEM bacterium. In Florida, Division of Animal Industry staff traced and tested 30 exposed mares and eight exposed stallions. No Florida horses were found to be positive during the investigation.

Florida utilized 22 Approved CEM Quarantine Facilities to handle the CEM importation

requirements for horses entering the United States. During fiscal year 2009-2010, 201 imported stallions and mares were processed through these facilities. There were no positive horses detected.

Equine Infectious Anemia

Equine Infectious Anemia (EIA), also known as "swamp fever," is an incurable bloodborne disease that affects only members of the equine species. It is transmitted primarily by large biting flies but may also be transmitted by contaminated needles and surgical instruments and through breeding. Once an animal is infected, it remains infected for the rest of its life. While some horses die from acute infections, most remain as seemingly symptomless carriers. However, infected animals are still capable of transmitting the disease and pose a threat to healthy animals. There is currently no vaccine or effective treatment for this disease.

EIA is a disease of worldwide significance. In some foreign countries the disease incidence may be as high as 50 percent or more. In the United States it has occurred in nearly every state; however, 90 percent of the cases occur in what is known as the "hot zone," those states bordering the South Atlantic Coast, the Gulf of Mexico, and the Mississippi River Basin, including Oklahoma and Texas. Disease risk in these areas is higher because environmental conditions are more favorable for prolonged insect vector seasons.

Florida's equine industry continues to be a vital economy to the state, and the Department is working hard to safeguard this important state resource from the potential

devastating effects of this disease. With support and cooperation from the state's equine industries, Florida was one of the first states to implement an EIA disease control program.

Last year more than 2.1 million horses were tested for EIA nationally. In Florida almost 130,000 horses were tested, with no reactors detected. On a national level roughly 20 percent of the equine population is tested annually, but in Florida approximately 30 percent of the horses are tested annually. In spite of being in the EIA "hot zone," Florida's EIA control program keeps the disease incidence at a very low rate (less than 0.004 percent), which is below the national level of 0.015 percent. This can be attributed to the Department's effective EIA control program and strong support from the state's equine industry.

Equine Piroplasmosis

Equine Piroplasmosis (EP) is an animal disease caused by the parasitic organisms *Babesia equi* and *Babesia caballi*, and is primarily transmitted to horses by ticks. The greatest risk of introduction of this disease is through importation of horses from countries where EP is endemic.

An outbreak of EP occurred in Florida beginning in August 2008, when a horse showing signs of the disease was admitted to a referral hospital in Ocala. The horse was determined to be infected with the EP organism, *Babesia equi*. The subsequent investigation ended in February 2009 after 25 premises were quarantined and over 200 horses were tested for the disease. The origin of the outbreak is believed to have been an infected horse imported from Mexico.

In the fall of 2009, a large outbreak was discovered in Southeastern Texas. Horses that were exposed to EP in Texas were traced throughout the United States. To date over 400 horses have been found to test positive for EP with the majority of those horses residing in Texas, including 292 on the index ranch in Texas. Florida received 10 trace horses from Texas that lived on the index ranch before being shipped to Florida. All 10 horses were accounted for with five testing positive for EP. During the investigation, 73 horses that were exposed to the positive EP horses were tested with none testing positive.

Florida requires import testing on all horses entering from endemic states, localities, regions, or U.S. possessions. Currently, any horses importing into Florida from Puerto Rico, the U.S. Virgin Islands, or Texas must be tested for EP, inspected and found free of ticks, and treated for ticks.

Arboviruses

Arthropod-borne viruses (arboviruses) are viruses that can be transmitted to humans and horses by mosquitoes. Arboviral infections in humans and horses may result in development of a fatal case of encephalitis: inflammation of the brain and spinal cord. These viruses are maintained in nature through continuous transmission between natural reservoir hosts (primarily wild birds) and certain species of mosquitoes (disease vectors). Humans and horses do not contribute to the spread of these diseases and, as such, are considered "dead-end" hosts. Although other animals are susceptible to arbovirus infections, humans and horses are most susceptible to developing clinical disease.

As arboviral activity is seen every year in Florida, an Arboviral Working Group has been formed. It involves many state agencies, including the Florida Department of Agriculture and Consumer Services, the Florida Department of Health, the Florida Wildlife and Conservation Commission, and the University of Florida, among others. This task force monitors the Florida arboviral situation all year, which includes testing and surveillance of sentinel chicken flocks, wild birds, horses, humans and other animals, and mosquitoes. The Bureau of Animal Disease Control's role involves the monitoring of equine populations for Eastern Equine Encephalomyelitis (EEE) and West Nile Virus (WNV).

Eastern Equine Encephalomyelitis

Eastern Equine Encephalomyelitis (EEE) is one of several arboviruses transmitted by infected mosquitoes that may cause fatal encephalitis in humans and horses. Mosquitoes become infected with the virus after feeding on wild birds. Transmission of EEE from horse to horse or horse to human via mosquito bites is highly unlikely because humans and horses are poor reservoirs for the virus. In humans and horses, the mortality rate is extremely high: 50 percent or more in humans and 80 to 90 percent in horses. Regular vaccination of horses is effective in greatly lowering the prevalence of this disease.

EEE is most often detected in horses during the months of May through September. Florida averages over 74 confirmed cases of EEE each year. Many of these cases appear in the same areas year after year. Mosquito activity in Florida may occur on a year-round basis; therefore, cases of EEE

may be reported during any given month. About every seven to 10 years, the number of cases reported reaches epidemic proportions and may be well over 100. In 2003 the number of cases reached epidemic levels with 207 cases being reported. The EEE activity during the fiscal year 2009-2010 was very close to the yearly average at 73 confirmed cases.

West Nile Virus

West Nile Virus (WNV) is another mosquitoborne viral disease that may cause encephalitis in humans and horses, but unlike EEE, the clinical course of the disease is not as severe and mortality rates are much lower: 25 percent to 30 percent in horses and less than 10 percent in humans. Vaccination of Florida horses is also recommended.

WNV is commonly found in wild birds, humans, and other vertebrate animals in Africa, Eastern Europe, Western Asia, and the Middle East, but until 1999 had not been documented in the Western Hemisphere. During the late summer of 1999, WNV was identified in New York City for the first time. By the end of the year, cases in wild birds, humans, and horses had been documented in three northeastern states. The virus survived the winter, and during 2000 continued to spread to 12 eastern coastal states.

By 2001 the virus had spread to 18 states, including Florida. Across the country more than 730 equine cases were confirmed, with 156 fatalities. Florida alone reported 492 cases with 82 deaths. In 2002 WNV expanded rapidly westward. Almost 1,500 equine cases were reported in 40 states. Approximately one-third of the affected horses died. Florida reported 499 cases

with 92 horse deaths. In 2003 there were 117 equine cases reported. This number has continued to decline in horses, and in fiscal year 2009-2010 there were seven confirmed cases in horses.

The Department continues to work closely with its other Arboviral Working Group partners to provide valuable surveillance data on equine cases. The EEE/WNV Equine Database has been an invaluable tool in tracking these diseases and reporting them to the working group in a timely manner. Early detection and reporting of arboviral cases help to warn citizens to take precautions against mosquito bites and to remind horse owners to ensure that their horses are appropriately vaccinated.

Swine

For fiscal year 2009-2010, 64,049 swine were inspected on 2,094 premises visits by field personnel. Of those swine, 17,989 were inspected at livestock markets, 8,376 were inspected at small animal sales, and 18,905 were inspected at fairs and shows.

Classical Swine Fever

Classical Swine Fever (CSF), also known as hog cholera, is a highly contagious viral septicemia affecting only swine. It has been eradicated from the United States since 1976. As the world's second-largest exporter of pork, the U.S. pork industry would suffer catastrophic losses should there be a CSF outbreak. Florida must remain vigilant in its surveillance for the emergence of foreign animal diseases because of its location and high feral swine population, the existence of garbage feeders, and increases in international travel. During the

past fiscal year, in accordance with a state-federal cooperative agreement, a targeted surveillance program of slaughter plants and high-risk swine populations (garbage feeders, feral swine) was begun. In 2009-2010, 1,505 serum (blood) samples were submitted to the U.S. Department of Agriculture Foreign Animal Disease Laboratory for testing.

Garbage Feeders

The cooperative State-Federal Swine Health Protection Act established standards for feeding waste to swine. The standards were designed to prevent the introduction of foreign animal diseases such as Foot-and-Mouth Disease and Classical Swine Fever (CSF) into U.S. herds. As the primary entity charged with fulfilling the requirements under this act, state inspectors have the responsibility of conducting monthly checks at facilities that collect edible waste food products that are cooked and fed to swine. During fiscal year 2009-20010, the Department licensed 72 garbage feeder operators and carried out a total of 874 inspections. Through these inspections, 54,060 garbage-fed swine were evaluated and, if needed, tested for disease.

Swine Brucellosis and Pseudorabies (Aujeszky's Disease)

Brucellosis is a contagious, costly disease affecting ruminants, swine, and humans. Caused by a bacterium, it affects livestock by causing abortion, low fertility, and lameness. Under the Cooperative State-Federal Brucellosis Eradication Program, Florida is classified a brucellosis-free state for its commercial production swine. Like brucellosis, pseudorabies is a deadly disease of

pigs that can be spread to cattle, horses, sheep, goats, dogs, and cats. An infection with this viral disease leads to high mortality in newborn piglets, and older pigs can become carriers of the virus for life. A voluntary cooperative eradication program for pseudorabies was established in the United States in 1989 and involves industry and federal and state government. The program's primary activities include surveillance, herd monitoring, and herd cleanup. Swine producers that wish to have Qualified/Validated status or Modified-Monitored/Validated status for these two diseases must first pass a risk assessment test and complete a herd health plan. Florida is classified a pseudorabies-free state (also within the Commercial Production Swine herds). For fiscal year 2009-2010, 98 animals were tested for pseudorabies and 221 animals were tested for swine brucellosis. Ten herds qualified as brucellosisfree and pseudorabies-free. Both of these diseases are highly prevalent in feral swine throughout Florida and continue to threaten backyard swine maintained in all areas of the state.

Reportable Animal Disease Tracking

Reportable diseases are those considered dangerous and transmissible. They can seriously impact animal, and sometimes public, health. Early disease detection is instrumental for effective control and eradication. Having a list of reportable diseases gives the state a roadmap to follow in carrying out its mission of protecting its populace from animal pests and diseases, which could have major economic and public health consequences. From that list the Department has developed a database on

which information concerning reportable animal disease investigations can be entered and evaluated. For fiscal year 2009-2010, 220 reports of suspected or positive dangerous, transmissible diseases were received and acted upon by the State Veterinarian's Office.



Cervidae

Florida's captive cervidae industry continues to grow. While this industry is licensed primarily by the Florida Fish and Wildlife Conservation Commission (FWC), the Department is a partner working with disease control issues and importation policies. A newly formed Florida Deer Association, with 300 active members, is working with the Department and game biologists to improve the herd health and genetics of Florida's captive cervidae herds. The Department's captive Cervidae Herd Health Plan requires mandatory testing of all animals that die or are killed if they are older than 16 months of age. Passive surveillance of symptomatic wild deer is also under way. To ensure these requirements are enforced, state personnel work with owners of captive cervidae herds on disease management programs. They conducted over 408 premises

inspections during the past fiscal year. No animals tested positive for tuberculosis, brucellosis, or CWD.

The Department continues to monitor the status of certain diseases affecting cervidae in other regions of the United States.

Chronic Wasting Disease

Chronic Wasting Disease (CWD) is a Transmissible Spongiform Encephalopathy (TSE) of deer and elk. To date, this disease has been found only in cervids (members of the deer family) in North America. First recognized as a clinical "wasting" syndrome in 1967 in mule deer in a wildlife research facility in northern Colorado, it was identified as a TSE in 1978. Currently, CWD has been confirmed in 18 U.S. states and two provinces in Canada. CWD is a progressive disease that attacks the brains of infected animals, causing the animals to become emaciated, display abnormal behavior, lose bodily functions, and subsequently die. CWD has become of particular concern due to its lack of known prevention and treatment, lack of a live animal diagnostic test, and unknown origin and means of transmission. There is no known relationship between CWD and any other TSE of animals or people, and there is no evidence that CWD poses any risk to human health.

Current growth and resultant rapid widespread movement in the cervidae farming industry increase the potential for the spread of CWD and other diseases of cervidae. Due to the potential threat CWD poses to Florida's captive and free-ranging cervidae populations, Chapter 5C-26, Florida Administrative Code, requires that cervidae being imported into Florida originate from a herd that participates in an official CWD surveillance/prevention program, be free of CWD for at least 60 months prior to importation, and originate from accredited tuberculosis-free and brucellosis-free herds. It also requires that all captive cervidae being transported within the state must originate from, and be moved to, premises currently licensed by FWC and currently enrolled in the Division of Animal Industry's Cervidae Herd Health Plan (CHHP) program. Since Rule 5C-26 became effective, the number of approved CHHP program herds has increased from 93 herds in 2002 to 318 as of June 30, 2010. Additionally, all cervidae being transported into or within Florida are required to be accompanied by a Certificate of Animal Movement, issued by the division within 30 days prior to movement. A total of 80 import permits and 215 intrastate movement permits were issued during fiscal year 2009-2010.

A federal CWD Herd Status Rule that will place specific requirements on cervidae being moved from state to state is still under consideration before becoming effective. The Division of Animal Industry is continuing to work with Florida's captive cervidae herd owners to help them achieve CWD Free Herd Status.

CWD has been diagnosed in both captive and free-ranging elk, mule deer, white-tailed deer, and black-tailed deer located in Canada, Colorado, Illinois, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, New York, North Dakota, Oklahoma, South Dakota, Utah, Virginia, West Virginia, Wisconsin, and Wyoming. The Department continues to work with the cervidae industry, USDA, and other state and federal agencies to prevent the intro-

duction of CWD and conduct surveillance in farmed and wild cervidae populations in Florida. During the 2009-2010 fiscal year, approximately 500 samples from free-ranging deer and three from captive cervidae herds in Florida were submitted for testing and all results were negative. No suspected clinical cases of CWD have been reported.



Companion Animal and Small Animal Programs

In 2003 the Division of Animal Industry designated a separate program area to monitor companion animal health issues within the state and ensure compliance with existing rules and legislation affecting companion animals. Efforts have continued and expanded as compliance with interstate and intrastate small animal movement requirements, health certification by accredited veterinarians in Florida, consumer protection and assistance, and rule development/legislative support areas are monitored.

A tracking system was implemented to address consumer complaints involving health certification and the sale of small animals (dogs and cats), covered by Section 828.29, F.S., the Pet Law, and Section 585.145, F.S., relating to the control of animal diseases

as well as Departmental rules. A total of 370 written complaints were processed in fiscal year 2009-2010. These complaints involved cases concerning both dogs and cats and were brought against pet stores, breeders, brokers, veterinary clinics, private sellers, and boarding kennels.

Mediation of these consumer complaints resulted in refunds of purchases in the amount of \$13,187. Approximately 8 percent of the cases/complaints were referred to the Office of Agricultural Law Enforcement and/or other agencies for further investigation. Educational letters were sent to sellers and their veterinarians in Florida in an effort to inform them of the requirements of Florida statutes governing the sale and health certification requirements of dogs and cats sold in or transported to Florida.

During the 2009-2010 fiscal year, division inspectors visited 267 pet stores to review Official Certificates of Veterinary Inspection and inform sellers about the requirements of the Pet Law for sales of dogs or cats in Florida.

Emergency Management

In the aftermath of Hurricane Andrew in 1992, Chapter 252, F.S. (State Emergency Management Act), was enacted which mandates the development of the Florida Comprehensive Emergency Management Plan. The plan establishes a framework through which Florida prepares for, responds to, recovers from, and mitigates the impacts of a wide variety of disasters that could adversely affect the health, safety and/or general welfare of the residents of the state. The plan provides guidance to state and local officials on procedures, organization,

and responsibilities. It also provides for an integrated and coordinated local, state, and federal response. To facilitate effective operations, the plan adopts a functional approach that groups the types of assistance to be provided into 18 Emergency Support Functions (ESF). Each ESF is led by a primary agency or organization that has been selected based on its authorities, resources, and capabilities in that functional area.

The Department is the primary agency for ESF 17. The Division of Animal Industry personnel provides staffing and leadership for ESF 17 activities at the State Emergency Operations Center in Tallahassee, and for response activities throughout the state. ESF 17's mission is to ensure a rapid, coordinated response to animal and agricultural emergencies that may result from natural disasters, dangerous transmissible diseases, or a bioterrorist event. In order to support its area of responsibility, ESF 17 coordinates activities of multiple county, state, federal, and volunteer agencies and organizations.

In order to effectively coordinate the efforts of multiple agencies and organizations, a State Agricultural Response Team (SART) was formed in 2003. SART operates as a multi-agency coordination group in support of ESF 17 activities. SART's mission is to support an effective and coordinated incident response for the animal and agricultural sectors in the State of Florida. SART currently has over 25 partner agencies, which meet regularly and provide guidance and support.

SART has staged emergency response equipment and supplies and provides numerous training opportunities for emergency responders throughout the state. SART



coordinates the preparation of a monthly newsletter and provides multiple training modules and informational materials for its SART members. For more information about SART and its activities and to access available resource material, visit the SART web site at www.flsart.org.

The division's animal disease response activities are included in the Florida Domestic Security Strategic Plan, which provides a blueprint for comprehensive, enterprisewide planning for domestic security efforts in Florida. Division personnel support this plan and also provide support for Florida's seven Regional Domestic Security Task Forces (RDSTFs), which are teams of counties that lead Florida's local and regional domestic security planning and response efforts. Division personnel support RDST-Fs by providing expertise and participating in their many activities and initiatives.

The division, in cooperation with the University of Florida's College of Veterinary Medicine and the Florida Veterinary Medical Association, sponsors and supports the Florida Veterinary Corps (FVC). The FVC is comprised of volunteer veterinarians, animal

health technicians, and volunteers who support response efforts during an emergency or disaster involving animals and animal health in Florida. The goals of FVC are to assess veterinary response capabilities in the impacted areas, provide emergency animal care, and support disease surveillance and control efforts in combating devastating diseases affecting Florida's animal industry. Currently, there are 86 veterinarians, animal health technicians, and volunteers enrolled.

The division, in cooperation the University of Florida's College of Veterinary Medicine, sponsors and supports the Veterinary Emergency Treatment Services (VETS) program. The VETS team is comprised of veterinarians and support staff from the college who support response efforts during an emergency or disaster involving animals or impacting the veterinary community in Florida. The VETS team is mobile and self-contained and can provide a wide range of emergency animal rescue and veterinary care services.

Following the passage of the Pets Evacuation and Transportation Standards Act (PETS Act) in 2006, Florida counties have sought assistance in establishing petfriendly shelters for their citizens. In 2009, division personnel met with 66 out 67 county emergency management agencies to provide assistance in establishing county pet-friendly shelters. During the county visits, a "Pet Friendly Evacuation and Sheltering Manual" produced by the division was provided.

Division personnel participated and provided presentations at many conferences.

These included the National Hurricane

Conference, the Governor's Hurricane Con-

ference, the United States Animal Health Association Annual Conference, and the Department of Homeland Security's Food and Agriculture Sector conferences. Division personnel also participated in multiple State Emergency Operations Center exercises, including a statewide hurricane exercise and a radiological incident exercise.

Diagnostic Laboratories

Due to Florida's unique geographic location, its close proximity to countries that have endemic diseases that are considered exotic or have been eradicated from the United States, the increased number of nonnative animal species introduced into the state, and the presence of international ports in Florida, the state occupies a critical position in the nation's agricultural industry. Imported animals pose a constant threat for the introduction of classic or foreign animal diseases. The ongoing threat of terrorism also raises concerns about the state's vulnerability to deliberately introduced biohazards. To meet these challenges, the Department's Bureau of Diagnostic Laboratories (BDL), comprised of the main laboratory in Kissimmee and the satellite laboratory in Live Oak, is staffed with veterinarians, biologists, and technicians who are highly trained in a range of diagnostic disciplines, including bacteriology, virology, molecular biology, toxicology, parasitology and entomology, and pathology.

The BDL performs numerous diagnostic tests across these disciplines and periodically conducts foreign animal disease exercises to ensure the staff's readiness to respond. It also provides diagnostic services to evolving industries and assists some wildlife rehabilitation programs. The

BDL continues to exchange information with other states to learn of disease issues that could affect Florida's livestock population. By examining routine blood, tissue, and other specimens, the laboratory monitors for the possible occurrence of foreign or exotic animal diseases. It also performs preliminary identification of suspect tick vectors associated with disease transmission.

The BDL (Kissimmee location) is approved by the National Animal Health Laboratory Network (NAHLN) to conduct testing for Avian Influenza (AI), Exotic Newcastle Disease (END), Classical Swine Fever (CSF), Foot-and-Mouth Disease (FMD), Chronic Wasting Disease (CWD), scrapie, and Novel H1N1 Influenza. It is approved by the National Veterinary Services Laboratory (NVSL) to perform testing for Contagious Equine Metritis (CEM) and screening for Equine Piroplasmosis (EP) and pseudorabies. The BDL (Live Oak location) also serves as the state/federal brucellosis laboratory. The BDL microbiology laboratory is a member of the Food Emergency Response Network (FERN) and has completed all FERN reguired training. This allows the BDL to assist the department's Bureau of Food Safety in testing for biological contamination in food during surge emergencies.

Many diseases are considered harmful to Florida's animal industry or to the general public. These diseases are listed as reportable to the Department. In addition to the monitoring and surveillance of animal diseases, the laboratories also conduct thousands of diagnostic tests each year to detect diseases of public health significance, such as West Nile Virus (WNV), Lyme disease, Rocky Mountain spotted fever, psittacosis (chlamydia), toxoplasmo-

sis, giardiaisis, brucellosis, salmonellosis, anthrax, leptospirosis, rabies, and many others. Rabies suspect animals that have been implicated in human exposure incidents are submitted to the laboratory for collection of samples. These samples are then forwarded to human diagnostic laboratories at the Department of Health for rabies virus testing. The BDL staff works closely with the Bureau of Animal Disease Control staff in the monitoring and implementation of disease surveillance programs.

During the fiscal year, the BDL has achieved its emergency preparedness goals of establishing a Laboratory Emergency Management Team (LEMT) and Bio-Safety Team (BST) and developing comprehensive emergency response, site-specific incident response and bio-safety plans, which are integrated into the bureau's quality management system. Over 26 training modules on bio-safety, bio-security, chemical hygiene and hazard plans, biomedical waste handling, packaging and shipping infectious substances, inhalation hazards, respiratory protection and quality assurance/quality control were attended by LEMT, BST, and other technical staff. For continued training and readiness, the LEMT and BST conducted regular exercises on Level C personal protective equipment and decontamination procedures, along with active participation in the division's respiratory protection program. The LEMT collaborated with local police and fire department emergency teams to form a coordinated response during emergencies involving the laboratory.

In 2009, two emergency preparedness exercises (EPEs) were conducted to test the bureau's emergency response plans. Each EPE was a simulated and unannounced

foreign animal disease outbreak scenario, facilitated by the division's Emergency Response Coordinator. Both EPEs were deemed successful by independent evaluators. The EPEs were followed by a facility vulnerability assessment review conducted by local and state officials representing the Department of Homeland Security, who later provided invaluable assistance in enhancing the laboratory's physical security. The LEMT is continually reviewing its written plans and protocols to ensure a state of readiness for an effective response.

The Telemedicine Project, spearheaded by BDL (Kissimmee location) to form a consortium between BDL and the pathologists at the University of Florida's College of Veterinary Medicine to present and discuss cases via virtual microscopy and teleconferencing technology, has been a continued success. There were more than 35 pathology cases presented and discussed among veterinary pathologists, epidemiologists, and students of both institutions in 2009. Field veterinarians and practitioners from the state have been invited to attend the presentations via the internet.

The BDL (Kissimmee location) has maintained its full certification status with the American Association of Veterinary Laboratory Diagnosticians (AAVLD) to conduct diagnostic testing. The satellite laboratory in Live Oak has also been granted provisional status to conduct diagnostic testing by AAVLD. The AAVLD sets the requirements for quality system standards among veterinary diagnostic laboratories in the United States. The AAVLD certification is recognized worldwide. The BDL will seek international certification status to continually challenge and improve its quality system.

BDL laboratory staff members have been actively performing surveillance testing in high-risk bird populations that consist mainly of backyard flocks, exhibition birds, and other non-industry-related bird populations. Additional samples have been received at both the Kissimmee and Live Oak laboratories for AI testing due to increased surveillance by the National Poultry Improvement Program (NPIP) and the Florida Fish and Wildlife Conservation Commission (FWC). The laboratories also continue to test for West Nile Virus (WNV) infection, a mosquito-borne disease that has continued to be prevalent in Florida. Several tests such as antigen capture enzyme-linked immunosorbent assay (ELISA), traditional reverse transcriptase polymerase chain reaction (RT-PCR), real-time (rt-RT-PCR) assays, and viral isolations are performed to diagnose infections with WNV. The BDL (Kissimmee) in conjunction with the Florida Department of Health monitors for WNV as well as other mosquito-borne arboviral diseases. Evaluating the spread of arboviral diseases in animals affords public health officials a barometer of impact to humans. New tests have allowed the laboratory to confirm the diagnosis of these diseases.

In addition to full instrumentation upgrades and facility renovations to meet the demands of the time, the BDL (Kissimmee location) received funding to initiate and complete construction of the first and second phases of the new campus master plan. The first phase was the completion of a new shipping and receiving building in October 2008, and the second phase was the completion of the new necropsy and incineration facility in July 2009. The new shipping/receiving and necropsy/incineration facilities, in tandem with the biosafety level 3 labora-

tory (BSL3), provided the BDL with significantly enhanced ability to perform zoonotic disease diagnostic testing within mandatory biological safety and security requirements. The third and final phase of the master plan is the construction of a main laboratory unit, which will complete the campus replacement. The final phase is expected to cost approximately \$33 million.

During fiscal year 2009-20010, the BDL tested over 349,000 submitted samples.

Bronson Animal Disease Diagnostic Laboratory

The Bronson (formerly Kissimmee) Animal Disease Diagnostic Laboratory (BADDL) in Kissimmee, the main laboratory of BDL, is a full-service, all-species laboratory receiving samples for diagnostic testing from domestic and exotic animal species with the exception of primates. The BADDL performs a wide variety of tests, ranging from full necropsy/anatomical pathology service to clinical pathology, histopathology, immunohistochemistry, microbiology (bacteriology/ virology/serology), toxicology, and molecular diagnostics. It also performs preliminary identification of suspect tick vectors associated with disease transmission. As a recognized core member of the National Animal Health Laboratory Network (NAHLN), the BADDL is approved to conduct testing for AI, END, CSF, FMD, CWD, scrapie, Novel H1N1 Influenza, CEM, EP, and most recently, pseudorabies, among other tests.

The BADDL has maintained its core membership with NAHLN and has continued to receive substantial cooperative grant funding from the USDA. The BADDL continued its commitment to send HL7-interfaced

result messages to NAHLN via an automated reporting system. The BADDL is a core participant, as well, in validation assays conducted by NAHLN.

In 2010, the BADDL was selected as a regional venue for a NAHLN-sponsored training exercise. The training, conducted in January 2010, was for high throughput testing for AI, END, CSF, and FMD using NAHLN-approved protocols and reagents. It was attended by trainees from Arkansas, Kentucky, South Carolina, and Florida. The trainers were from the Foreign Animal Disease Diagnostic Laboratory (FADDL) in Plum Island, New York.

The availability of a Bio-Secure Level 3 (BSL3) facility and modern instrumentation at BADDL enables the bureau to provide rapid laboratory diagnosis for endemic or foreign animal diseases that are introduced into Florida either naturally or intentionally (bioterrorism), which could result in potentially devastating disease outbreaks. The BSL3 staff has been trained in methods using new procedures in molecular diagnostics, including rt-RT-PCR technology. The laboratory is certified by the USDA to perform rt-RT-PCR for the detection of AI, END, CSF, FMD, novel H1N1 influenza, and CWD by immunohistochemistry techniques (IHC). For this fiscal year, the BADDL analyzed approximately 3,900 samples by PCR.

The BSL3 in tandem with the new shipping/receiving and necropsy/incineration facilities would allow the BADDL to process large numbers of samples in response to major outbreaks of emerging, endemic, or foreign animal disease, occurring locally or nationally.

In fiscal year 2009-2010, the BADDL analyzed approximately 63,000 samples. BADDL has also responded to, processed, and tested samples associated with three major diseases in equines: CEM, EP, and Eastern Equine Encephalitis. The laboratory staff has been trained and proficiency-tested to perform sample preparations and test procedures to detect and diagnose these diseases accurately in a timely manner.

In addition to arboviral disease surveillance, the laboratory is continuing its surveillance for END, AI, FMD, and CSF as part of the NAHLN effort to detect foreign animal disease before outbreaks pose serious problems to agriculture. The surveillance program is a concerted effort between the Bureau of Animal Disease Control field staff, the BDL, and the USDA.

Live Oak Animal Disease Diagnostic Laboratory

During fiscal year 2009-2010, the Live Oak Animal Disease Diagnostic Laboratory worked to gain infrastructure, training, and testing improvements aimed to better serve Florida's animal industries. These proposed enhancements are intended to position the laboratory to meet changing needs and allow flexible response for future demands. The Live Oak Laboratory performs mainly Florida program testing for USDA-regulated program diseases, including brucellosis, Equine Infectious Anemia, pseudorabies, Avian Influenza, Avian Mycoplasmas, Pullorum Typhoid, and Johne's disease. During this fiscal year, the Live Oak Laboratory tested 286,713 samples. Results for these tests were reported to officials responsible for emergency eradication

efforts or ongoing animal disease control programs. These programs were primarily for cattle, horses, poultry, and swine.

Poultry disease surveillance for the area broiler industry is a major component of sample submission and testing regularly conducted at the Live Oak Laboratory. These surveillance tests monitor birds for Salmonella, AI, and other disease entities critical to poultry production and economics. Ongoing regular submissions of diseased backyard poultry via Bureau of Animal Disease Control field operations yields surveillance samples that could provide early detection of diseases that could be very detrimental to Florida's poultry industries.

The laboratory staff worked closely with the Bureau of Animal Disease Control field staff and District veterinarians on numerous individual cases as well as several ongoing disease programs to assist in the early detection of monitored diseases and to provide surveillance for the emergence of new animal disease threats.

Feed, Seed and Fertilizer

The Bureau of Agricultural and Environmental Laboratories, in the Division of Agricultural Environmental Services, conducts chemical, physical, and biological analyses of commercial feed, agricultural, vegetable, and flower seed, commercial fertilizer, agricultural liming materials, and pesticide formulations sold in the state to assure compliance with label guarantees for all active ingredients, nutrients, components, and properties.

ANNUAL REPORT 2009 / 2010

SUPPORTING FLORIDA AGRICULTURE

The Bureau of Compliance Monitoring, also in the Division of Agricultural Environmental Services, has statutory oversight and regulatory authority over the distribution of feed, seed, fertilizer, and pesticides in Florida. The bureau ensures that the more than 3,000 distributors of feed, seed, and fertilizer products in Florida are registered or licensed and that their products meet current regulatory standards and label guarantees.

The Commercial Feed Program is responsible for assuring that the commercial feed supply meets safety and nutrient-content standards through registration of feed manufacturers and distributors, directed inspection of feed products, and supervision of certified laboratory analyses on a variety of feed products sold or produced in the state. The Seed Program ensures that Florida's consumers have a source of pure, high-quality seed that meets or exceeds all state and federal standards. The bureau's Fertilizer Regulatory Program stands out as one of the most innovative and progressive regulatory programs in the country, ensuring that Florida farmers and consumers receive quality fertilizers for all their growing needs.

Bureau of Agricultural and Environmental Laboratories Statistics

Feed Samples 1,575
Illegal Feed Samples 76
Percent Illegal Feed Samples 4.8 percent
Feed Sample Determinations5,756
Fertilizer Samples 3,833
Deficient Fertilizer Samples1,320
Percent Deficient Fertilizer

Samples34.4 percent
Fertilizer Sample Determinations245,274
Seed Samples 3,006
Illegal Seed Samples117
Mislabeled Seed Samples635
Percent Illegal Seed Samples3.9 percent
Percent Mislabeled Seed
Samples21.1 percent
Seed Sample Determinations 64,117
Commercial Seed Samples125

Bureau of Compliance Monitoring Statistics

Feed

Feed Companies Registered8	22
Samples Submitted and Analyzed	
(76 violations)1,5	81
BSE Inspection Completed	
under Contract and Cooperative Agreeme	ent
with FDA3	30

Seed

Seed Dealer Licenses Issued 2,	229
Samples Collected	023
Pounds of Contaminated Agricultural See	ed
Subject to Stop Sale81,	200

Fertilizer

Fertilizer Licenses Issued	548
Specialty Fertilizer Products	
Registered1,7	769
Penalty Assessments Levied Against	
Fertilizer Companies (of which \$337,774 w	vas
returned to consumers)\$365,9	953



Office of Agricultural Water Policy

Best Management Practices

The Department, through the Office of Agricultural Water Policy (OAWP), has adopted Best Management Practices (BMPs) for water conservation and water quality for various agricultural land uses throughout the state. Agricultural BMPs are practices or combinations of practices determined through research, field testing, and expert review to be the most effective and practicable on-location means for improving water quality in agricultural discharges. (Both economic and technological concerns are taken into consideration.) The development and implementation of agricultural BMPs are directed by statute and are the primary means for the agricultural community to comply with state water-quality standards.

In developing BMPs, the OAWP works with the agricultural industry, Florida Department of Environmental Protection (DEP), the University of Florida's Institute of Food and Agricultural Sciences, the state's Water Management Districts, environmental community stakeholders, and others. During fiscal year 2009-2010, OAWP adopted a statewide rule providing the option for commercial animal and multi-commodity operations to develop and submit conservation plans to implement site-specific BMPs. OAWP anticipates adopting a manual for equine operations and a manual for specialty fruit and nut farms by spring 2011.

OAWP staff and OAWP-funded implementation teams work throughout the state to assist producers in selecting and implementing the BMPs applicable to their operations. In fiscal year 2009-2010, producers enrolled approximately 450,000 acres in OAWP BMP programs. The total number of acres enrolled as of June 30, 2010, is more than 2.2 million. Some of the enrolled operations may have gone out of production due to conversion to urban development and other reasons. OAWP staff continues to update enrollment information in the database.

State and Federal Cost-Share Programs

In order to assist agricultural producers in implementing BMPs, the OAWP has developed working partnerships with various state and federal agencies. Through these partnerships, cost-share reimbursement is available for growers to implement BMPs that are otherwise cost-prohibitive. Currently, the OAWP has active agreements with the Natural Resources Conservation Service (USDA-NRCS), Southwest Florida Water Management District, South Florida

Water Management District, and several of the state's Soil and Water Conservation Districts and Resource Conservation and Development Councils in order to administer these cost-share programs. During this fiscal year, staff was able to deliver only a minimum amount of cost-share programs due to budget shortfalls. However, OAWP helped secure dedicated NRCS funds for the Plant City/Dover area through the Agricultural Water Enhancement Program (AWEP). Growers in the area apply directly to NRCS. The funds will be used for tailwater recovery systems, to reduce grower dependence on groundwater sources for irrigation. This is particularly important when irrigation is used for frost-freeze protection. OAWP also helped secure AWEP funds for the Suwannee Basin to assist farmers in conserving water through irrigation system improvements.

BMP Implementation Follow-up

In October 2009, OAWP published its second Implementation Assurance report to summarize the overall level of BMP-implementation-specified commodities or regions of the state. The report, which is based on written surveys and site visits, provides information on producer implementation of BMPs identified on Notices of Intent submitted to the Department under various BMP rules. The report focused on implementation of BMPs in the Gulf Citrus and Peace River-Manasota regions, the Suwannee River Basin, and the Northern Everglades. Other commodities and areas of the state will be covered on a staggered schedule. Another report will be issued in the spring of 2011 and will focus on, the Suwannee River Basin, the Northern Everglades, and vegetable and row-crop operations statewide.

Field Staff and Technical Services

The OAWP has field staff co-located with the five Water Management District offices throughout the state. They help growers with BMP implementation by providing assistance with state and federal programs, conservation planning, BMP enrollment, and cost-share application information. Field staff participates in the Department of Environmental Protection's total maximum daily load (TMDL) program during the establishment of TMDLs and the development of Basin Management Action Plans (BMAPs) to implement TMDLs. OAWP's role in the BMAP process is to ensure that agriculture is adequately represented and that agricultural impacts to water quality are appropriately addressed. During the fiscal year, staff participated in TMDL/BMAP processes in at least a dozen priority watersheds throughout the state.

Regional Partnerships

Suwannee River Partnership: The Suwannee River Partnership (SRP) was formed in 1999 as a coalition of state, federal, and regional agencies, local governments, and private industry representatives working together to reduce nitrate levels in surface waters and groundwater and to conserve water resources within the Suwannee River Water Management District. The SRP continues to assist dairy, poultry, and rowcrop farmers with BMP and conservation plan implementation. During the fiscal year SRP staff has assisted farmers in implementing BMPs, supported the continuation of springshed protection programs, worked on improving site inspection processes to evaluate BMP implementation, and assisted in the implementation of BMP demonstration programs, among other things.

Northern Everglades and Estuaries Protection Program: The Lake Okeechobee Protection Program was established by the 2000 Legislature to restore and protect the lake. Staff worked with DEP and SF-WMD to implement the Lake Okeechobee Protection Plan that was submitted to the Legislature in 2004. The recommendations included in the plan are designed to reduce phosphorus loads from agricultural operations and implement long-term solutions based on the lake's phosphorus total maximum daily load. In 2007, the Legislature expanded the scope of the program to include the St. Lucie and Caloosahatchee River watersheds, renaming it the Northern Everglades and Estuaries Protection Program (NEEPP). The OAWP continues to work closely with DEP, SFWMD, and other stakeholders in this area to implement the recommendations of River Watershed Protection Plans pursuant to legislative resource protection goals and directives. OAWP staff also represented the Department on basin working groups for the development of basin management action plans for the St. Lucie and Caloosahatchee River watersheds.

During the 2009-2010 fiscal year, NEEPP staff:

- Enrolled approximately 180,000 cow/calf acres throughout the NEEPP.
- Conducted more than 40 BMP Implementation Assurance site visits.
- Participated in ongoing strategic planning meetings regarding the Florida Ranchlands Environmental Services Program (FRESP), or Payment for Environmental Services Program.

Assisted farmers with the installation of surface water control structures, using cost share funding received from the South Florida Water Management District.

 Attended or made presentations at the Polk County Cattleman's Association Rodeo, the Equine Adoption Foundation in Martin County, the Fisheating Creek Landowners Group, and the Cattleman's Association Annual Meeting.

In addition to the above, NEEPP staff continued to assist row-crop farmers, citrus producers, and nursery operations with BMP and conservation plan implementation.

Mobile Irrigation Laboratories

Mobile irrigation laboratories (MILs) provide on-site water conservation assistance to the agricultural industry and the general public, under the coordination and administration of OAWP staff, the Water Management Districts, and/or the USDA-NRCS. This assistance typically includes site-specific irrigation system testing, diagnostics, irrigation scheduling, and/or recommendations for system repairs, upgrades, or retrofits consistent with the Department's BMP implementation and federal conservation planning programs. During this fiscal year, the Department received continued funding from the Florida Legislature to support the statewide MIL water conservation effort.

For more than a decade, MILs have been operating throughout Florida. Presently, there are 16 MILs providing service in 51 counties. Of the 16 MILs, 10 are agricultural and six are urban. Recognizing the invaluable service that MILs provide to the

state's agricultural industry, the OAWP continues to help fund MILs (via partnerships with state and federal agencies), improve MIL services and programs, and document related activities and water savings. Because of budget constraints during fiscal year 2009-2010, the OAWP discontinued funding support for a second year toward several urban MILs in the state.

If fully implemented, the evaluation recommendations given during fiscal year 2009-2010 by the 10 agricultural MILs would save approximately 2 billion gallons of water a year. The cost to conserve water through MIL services is very competitive, when compared to the costs to develop new sources of water.

Ombudsman Assistance

Pursuant to statute, the OAWP has a Memorandum of Agreement with the five Water Management Districts (WMDs) regarding surface water permitting of agricultural operations. If requested by a WMD, staff produces a written opinion, based on legal and technical findings, to help the WMD determine whether an agricultural activity meets statutory requirements for exemption from surface water permitting. During this fiscal year, OAWP staff assisted in two cases with SWFWMD and one case with SFWMD to determine whether the activities in question were exempt pursuant to Section 373.406(2), F.S. Staff also facilitates informal discussion between producers and WMDs regarding other regulatory matters, such as consumptive use permitting and actions to address groundwater impacts. The ombudsman assistance is an increasing workload for OAWP.



Agricultural Law Enforcement

The Office of Agricultural Law Enforcement (OALE) consists of the Bureau of Uniform Services, the Bureau of Investigative Services, and the Bureau of Administrative Services, and is dedicated to the protection of Florida's agriculture and food supply. The office supports all regulatory and law enforcement programs of the Department and engages in cooperative partnerships with many federal, state, and local law enforcement agencies throughout the state. It works to safeguard the agricultural industry from the introduction of devastating diseases and pests, to secure the state's borders, and to investigate criminal acts against consumers, criminal and civil violations occurring within state forests, and those crimes involving agriculture, horticulture, and aquaculture.

The Florida Contraband Forfeiture Act authorizes the Office of Agricultural Law Enforcement to seize and forfeit real and personal property, including currency, vehicles, aircraft, and other articles that are

used in violation of the act. In addition, the office conducts joint law enforcement ventures with federal agencies that result in the seizure of cash and property.

An accreditation program has long been recognized as a means of maintaining the highest standards of professionalism. Accreditation is the certification by an independent reviewing authority that an entity has met specific requirements and prescribed standards. The Office of Agricultural Law Enforcement was accredited by the Commission for Florida Law Enforcement Accreditation, Inc., in 2007. Once every three years, accredited agencies are required to host a visit from representatives from the Commission in order to retain accredited status. The Office of Agricultural Law Enforcement was awarded re-accredited status on July 1, 2010.

Bureau of Uniform Services

Interdiction Stations

The Office of Agricultural Law Enforcement's interdiction stations are Florida's first line of defense in the protection of its agriculture. The Department operates 22 agricultural inspection stations located on all paved highways crossing the natural boundary of the Suwannee and St. Mary's rivers. In addition, the Department operates a 23rd inspection station, which is located on Interstate 10 at the Florida-Alabama line. Agricultural vehicle inspections are conducted at each location around the clock, 365 days a year, by 215 law enforcement personnel and a support staff of five individuals.

These officers support and supplement all of the Department's regulatory and

law enforcement programs by conducting inspections of highway shipments of agricultural, horticultural, aquacultural, and livestock commodities. These regulations and programs ensure compliance with Federal-State Marketing Agreements as well as laws, rules, and regulations enacted to make certain the public receives quality food products. Programs are also designed to prevent, control, and eradicate specific plant and animal pests and diseases that could economically devastate segments of Florida's agricultural industry.

The state's border security is one of the four cornerstones in Florida's domestic security initiative. The increased vigilance of the Department's law enforcement officers has strengthened Florida's surface border protection. The implementation of the plan has resulted in the following:

- Performing interdictions/inspections of all commercial traffic and rental trucks entering and exiting the state.
- Tracking vehicles transporting dangerous cargo entering all interdiction stations.
- Utilizing real-time imaging of documents to track movement of agricultural commodities and livestock entering and exiting the state of Florida.
- Utilizing mobile gamma ray technology to enhance detection of plants, pests, or animal disease, and safeguarding Florida against agri-terrorism and contraband smuggling.
- Utilizing canine (K-9) teams, specially trained to detect illegal plant and animal material. These specially trained dogs

detect animal and plant materials that may harbor infectious diseases that could be harmful to Florida's farming community as well as to public health.

- Maintaining a 24-hour toll-free hotline to report suspicious inbound or outbound commercial vehicles, as well as other agriterrorism issues.
- Increased staffing at all interdiction stations post-September 11, 2001, has resulted in the identification of over 803 illegal aliens who attempted entry through concealed means. It has also resulted in the recovery of \$29.4 million in contraband, including narcotics, currency, and stolen property.
- Implementation of a camera system at key locations with tag recognition software that enhances bureau personnel's ability to detect suspect carriers.

To facilitate movement of commercial highway traffic, the Office of Agricultural Law Enforcement continues a public/private partnership with the Florida Department of Transportation and private enterprise, to provide commercial carriers with the Pre-PassTM electronic identifier which may allow some vehicles to bypass interdiction stations, reducing station traffic and allowing Department officers to concentrate their efforts on specific carriers of agricultural, horticultural, aquacultural, and livestock commodities.

During fiscal year 2009-2010, Department officers conducted 9,324,532 vehicle inspections that detected 9,726 violations, which resulted in 233 arrests, 6,830 warnings, 2,601 administrative actions, and the apprehension of 62 illegal aliens. Officers

also seized illegal narcotics currency and recovered stolen property valued at \$1.3 million.

During times of natural disasters, bureau officers function as members of Florida's Mutual Aid Response Team, participating in relief efforts to ensure that devastated areas receive adequate law enforcement protection.

The Department also cooperates with federal, state, and local governmental agencies on projects, both criminal and non-criminal, which either improve the efficiency of agricultural programs or generate additional revenues to the state without increasing costs to Florida's citizens.

Department officers collected and provided the Florida Department of Revenue with 57,551 bills of lading pertaining to certain types of cargo entering Florida. These efforts resulted in an additional \$5,975,715 in sales and use taxes being collected by the state during fiscal year 2009-2010-money that would have otherwise gone uncollected. This cooperative effort not only greatly enhances the state's ability to collect sales and use taxes but also precludes out-ofstate contractors and businesses from gaining an unfair competitive advantage over Florida entrepreneurs. Since the inception of the program in April 1993, this cooperative effort has resulted in the detection and collection of over \$176 million in otherwise undetected sales and use taxes.

Bureau of Investigative Services

The Bureau of Investigative Services is one of three designated bureaus in the Office of Agricultural Law Enforcement and provides



investigative and technical support to the bureau of Uniform Services and Bureau of Administrative Services in daily operations.

The bureau provides investigative support for all divisions of the Department in both civil and criminal matters over which the Department has jurisdiction.

The bureau works closely with all local, state, and federal agencies, providing investigative assistance and support in all matters over which the Department has jurisdiction, and is directly involved in safeguarding the pubic in issues relating to homeland security.

Bureau Mission

The mission of the Bureau of Investigative Services is to provide a safe and secure environment for the citizens of this state by:

- Protecting consumers against unfair and deceptive trade practices;
- Protecting the states diverse agricultural industry from theft and other related crimes:

- Preserving and safeguarding the wholesomeness of food and other consumer products;
- 4. Protecting the state's natural resources.

To safeguard the public, the bureau aggressively investigates criminal complaints seeking appropriate judicial intervention to resolve the complaint and prevent future acts of wrongdoing.

Bureau Responsibilities

The responsibilities of the Bureau of Investigative Services are as follows:

- The investigation of matters over which the Department has jurisdiction, and incidents occurring on property owned, managed, or controlled by the Department of Agriculture and Consumer Services.
- The investigation of criminal and civil violations occurring within State Forests or any crimes involving farms, farm equipment, animals, livestock, poultry, and agriculture in general, and any crimes involving horticulture, aquaculture, or citrus products.
- The enforcement of laws against environmental crimes such as illegal dumping, and laws governing outdoor open burning. All personnel in the bureau are trained in fire and arson investigations, and investigate fires occurring in wildland and urban areas.
- The enforcement of laws governing consumer issues, including illegal telemarketing operations, sale of business opportunities, solicitations of contributions, sellers of travel, motor vehicle repair fraud, health studios, dance studios, pawnshops, moving and storage companies, and price-gouging.

- Developing and processing criminal intelligence information, conducting crime analysis of reported crimes, conducting research of persons suspected of committing crimes, and conducting background investigations on prospective employees of the agency.
- Providing personal protection services for the Commissioner of Agriculture and other dignitaries as needed.



Domestic Security

The bureau is actively involved in issues relating to domestic security and actively participates in all seven regional Domestic Security Task Forces statewide.

The bureau has two positions assigned to the state's joint response team under the direction of the Department of Environmental Protection. The team, which is represented by several state agencies, is trained in the response to and investigation of bio-hazard incidents statewide.

The bureau continues to conduct threat assessments of regulated entities affiliated with fertilizer, pesticide, food, and petroleum production and distribution points. The bureau also investigates theft, shrinkage, and suspicious activities regarding these materials.

In addition to these duties, the bureau is engaged in a cooperative partnership with all federal, state, and local agencies in all 67 counties, providing investigative support in all matters over which the Department has jurisdiction.

Accomplishments

During fiscal year 2009-2010, the bureau initiated 2,940 investigations. The general categories used to classify investigations and the numbers of investigations conducted for each category are shown in the chart below. General categories may have subcategories associated with them.

Category	#	Category	#	Category	#
Animal / Livestock	64	Entomology / Pest Control	49	Licensing Related	12
Aquaculture	10	Environmental	11	Persons	9
Arrest on Warrant	2	Executive Investigations	5	Plant Related	9
Background / Pre-employ	50	Field Interview	5	Special Details	2
Bomb Threat / Dist. Device	0	Fire Related	646	Standards Related	10
Burglary / Trespass	10	Food Safety	25	State Lands Related	1,439
Bypassing Ag Station	1	Fruit and Vegetable	110	Theft	46
Consumer Related	332	Illegal Aliens	0	Traffic	29
Dignitary / Protective Ops		Informational Only	20	0ther	0
Drugs/Alcohol	22	L.E. Sensitive / Intel.	0	Total Cases Initiated	2,940

Arrests/Notices to Appear (NTAs)/Civil Violations/Written Warnings – Field Interrogation Reports (FIRs)

The following is a cumulative total of actions taken involving known violators:

Number Known Violators		Number Related Charges	
Adult Felony	42	Adult Felony	103
Adult Misdemeanor	58	Adult Misdemeanor	116
Juvenile Felony	7	Juvenile Felony	7
Juvenile Misdemeanor	5	Juvenile Misdemeanor	7
Juvenile Diversion	8	Juvenile Diversion	8
Misdemeanor NTAs	96	Misdemeanor NTAs	104
NTA Non-Criminal	428	NTA Non-Criminal	430
UTC Criminal	6	UTC Criminal	6
UTC Non-Criminal	12	UTC Non-Criminal	15
Adult Written Warnings/FIRs	791	Adult Written Warnings/FIRs	811
Juvenile Written Warnings/FIRs	21	Juvenile Written Warnings/FIRs	21
Total Known Violators	1,474	Total Violations/Charges	1,628

Restitution/Recovery/Seizure/ Reimbursement

The bureau has been directly involved in the investigation of significant drug seizures, recovery of stolen property, and the payment of restitution to the Department for expenses associated with investigative costs. For fiscal year 2009-2010, the restitution, recovery, and seizure collections by the bureau totaled \$3,141,020.

In addition to the \$3,141,020 identified above, the bureau assisted the Bureau of Uniformed Services in the recovery of contraband valued at \$871,000.

Bureau of Administrative Services

Reaccreditation

The Office of Agricultural Law Enforcement received initial accreditation from the Com-

mission for Florida Law Enforcement Accreditation (CFA) in 2007. Once every three years, accredited agencies are required to host a visit from representatives from the commission in order to retain accredited status.

During the week of April 19-23, 2010, OALE welcomed a team of assessors from CFA. For three days, the team worked at Tallahassee Headquarters, while two assisting assessors visited the Interdiction Stations on I-95 and I-75. The team examined all of OALE's operations, from fiscal controls to property and evidence, police operations, and investigations, and in the end returned a report that was noted as "flawless" by the Commission. OALE was subsequently awarded re-accredited status on July 1, 2010.

Also, in October 2009, Bureau Chief Cheryl DeGroff was recognized for her contributions to the success of accreditation in

Florida by being awarded the Certified Accreditation Professional designation. Chief DeGroff is one of only 15 people in Florida that have received this illustrious designation.

Domestic Marijuana Eradication Program

In January 2005 the Office of Agricultural Law Enforcement became the pass-through agency for the Outdoor Domestic Marijuana Eradication Program through the U.S. Drug Enforcement Administration. In January 2008, OALE assumed coordination of the Indoor Domestic Marijuana Eradication Program and became the Drug Enforcement Administration's point agency for this program in Florida. OALE's role involves collecting data, providing reimbursement funds to local law enforcement agencies for both indoor- and outdoor-grown marijuana, and providing training in indoor and outdoor cannabis investigations and eradications.

During fiscal year 2009-2010, the bureau collected statistical data related to marijuana eradication missions from local law enforcement agencies around the state. Additionally, the Bureau of Investigative Services assisted in providing training opportunities to all law enforcement agencies throughout the state regarding information submission, reimbursement procedures, and investigative and detection techniques. The following chart outlines a brief synopsis of accomplishments for calendar year 2009:

Outdoor

Plots Eradicated	295
Cultivated Plants Eradicated	. 10,070
Bulk/Processed Marijuana	

Seized	21 pounds
Total Arrests / Charges File	d157
Firearms Seized	79
Total Assets Seized	\$51,084.47

Indoor

Plots Eradicated	863
Cultivated Plants Eradicated .	55,378
Bulk / Processed Marijuana	
Seized	3,572 pounds
Total Arrests / Charges Filed.	929
Firearms Seized	190
Total Assets Seized	\$ 2,537,423.93



The following chart outlines the accomplishments of the first six months of calendar year 2010.

Outdoor

129
. 3,503
ounds
69
10
\$4,055
$\psi +, \cup \subset$

Indoor

Plots Eradicated	404
Cultivated Plants Eradicated	23,300
Bulk / Processed Marijuana	
Seized	2,005 pounds
Total Arrests / Charges Filed	460
Firearms Seized	74
Total Assets Seized	\$784,497

Property and Evidence

The Property and Evidence Administrator serves three primary functions: inventory, uniforms, and evidence. The Department inventory is conducted yearly and involves traveling throughout the state to verify the locations of all OALE inventory items. The administrator also supplies approximately 270 law enforcement professionals with the uniforms and gear needed for their daily activities. In addition, the administrator manages the Rhodes Building Evidence Room while overseeing six other evidence rooms in the state, assuring that evidence is collected and stored within the guidelines and rules set forth in Florida Statutes and Department policy.

Training

The bureau's Training Section coordinates and delivers law enforcement and civilian training to all OALE personnel, as well as personnel with other law enforcement agencies. The Training Section delivered over 5,000 contact training hours to sworn personnel. In addition to legal and ethics training, officers received training in high liability areas such as firearms, dart-firing stun gun, and use of force. Officers also received training on CPR, first aid, and AED.

For the first time in OALE history, the Training Section was able to certify the agency in TASER training. Sworn personnel now carry an X26 TASER in the line of duty as a less-than-lethal weapon option.

The Training Section expanded its Field Training Program by 10 new Field Training Officers. The Field Training Program now has 35 Field Training Officers. During fiscal year 2009-2010 23 new officers completed the Field Training Program.

Records Management

Records Management has been focused on establishing OALE document applications (document types) in Enterprise Imaging System (EIS) records software, their fields, retentions, and creating EIS user manuals for staff training. User manuals have been broken into three sections: Manage Users (administrators only), Scanning/Indexing, and Search/Read Only.

The OALE EIS records software will allow the scanning or adding of new documents into records storage, allow staff to have access to assigned documents they need to

satisfy their job requirements, and reduce the need for paper document storage.

The continuing focus will be to train all staff members in using the OALE EIS records system to serve Florida's open government and public records laws, to supply staff access to documents to meet their job needs, and to help protect and serve the people of Florida by maintaining OALE records according to the law.

To date, the total number of documents scanned into the OALE EIS Records storage system is 134,480.

The goal of the Forms and Publications Coordinator has been to have all current versions of forms and brochures available to the OALE staff and the public. All forms and publications have been hyperlinked to the FDACS web site through a spreadsheet so that the current version is available and most are form-fillable. Non-fillable hard copies have also been placed under the Department electronic policy system, PowerD-MS, and will be updated upon any changes that occur.

Recruiting

In an effort to maximize recruiting with minimal spending, a recruiting team was selected to speak with new recruits at FDLE-approved academies throughout the state. The Bureau of Administrative Services is following the activities of the 34 academies throughout the state, from the basic recruit classes, to corrections to law enforcement crossover classes, to out-of-state transfer classes. The administrative assistant to Chief DeGroff contacts the academy director and coordinates the visit between the

school and the recruiting team member. It is the goal of this project to have a recruiter speak at each school by the end of the calendar year. In the future, the goal is to have a recruiter speak to each class prior to graduation.

Social Networking

The current trend of social networking has reached OALE. The Bureau of Administrative Services has instituted a Twitter page, and is in the early stages of constructing a Facebook Fan Page. The Twitter page is used as a "micro-blog" about happenings within OALE. The main objective is to update OALE's followers when jobs are posted; however, any press releases involving OALE have been posted as well. Many times, OALE's posts, or "tweets," are reposted by OALE's followers on their sites, thereby increasing OALE's exposure exponentially. Future use could include updates regarding station closures or alerts.

A Facebook Fan Page will serve a similar purpose as Twitter, but will allow for the posting of pictures, and comments by those who "fan" OALE via Facebook.

Plant Protection, Inspection and Certification

The Division of Plant Industry is the plant protection arm of the Department. It works to detect, intercept, and control plant and honey bee pests and diseases that threaten Florida's native plant and agricultural resources. The division maintains these functions through five bureaus:



- Pest Eradication and Control
- Citrus Budwood Registration
- Methods Development and Biological Control
- Plant and Apiary Inspection
- Entomology, Nematology and Plant Pathology

This fiscal year, the division encountered new challenges with the discovery of new pests and diseases such as citrus black spot, Mikania micrantha or mile-a-minute weed, and cotton seed bug. There has also been the discovery of old ones like the Mediterranean fruit fly (Medfly) in Palm Beach County and a single redbay ambrosia beetle find in Miami-Dade County north of the avocado-growing area. The division continues to address known pests and diseases through the application of survey, research, and pest management, including regulatory requirements and biological control. Some examples of these pests and diseases include citrus greening, citrus canker, Africanized honey bees, colony collapse disorder, pink hibiscus mealybug, Texas Phoenix palm decline, gladiolus rust, Phytophthora ramorum, and redbay ambrosia beetle/laurel wilt disease. In addition, the division is also on the lookout for new pests

and diseases of agricultural importance such as fruit flies of economic importance, potato cyst nematode, pests and diseases in solid-wood packing materials, laurel wilt in commercial avocado areas, giant African land snails, light brown apple moth, and the emerald ash borer.

Boca Raton Mediterranean Fruit Fly Response Program

During routine fruit fly monitoring in early June, a trap containing suspect Mediterranean fruit flies (Medflies) was collected in Boca Raton by a division inspector. The find was confirmed to be wild Medflies by a state entomologist and this find triggered an eradication program. The flies have been found on traps in mango, loquat, and sour orange trees. This is the first major outbreak of Medfly since the nine-county \$32 million eradication program in 1997 and 1998. As of June 30, eight females, 48 males, and 11 larvae have been found.

Division and U.S. Department of Agriculture staff are currently deployed to the Delray and Boca Raton area and are using the incident command structure to combat this pest. Assistance is being provided by the Division of Forestry. Incident Commanders are working with local governments to keep the public involved and updated with accurate information.

Several activities are under way in the regulated area, including increased trapping, regulatory measures, and control strategy. As many as 2,000 traps have been placed and are being checked according to the eradication action plan.

Treatment for the Medfly includes foliar spot treatment with bait spray of host and non-host trees, soil drench of soil under host trees and of soil on adjacent properties known or suspected of having Medfly larvae, and fruit stripping of trees within 656 feet of where larvae is found. Sterile insect release began June 22. Sterile male flies are being released aerially and by ground in the treatment area. Aerial release will continue weekly in the area.

Quarantine of host fruits, vegetables, and nuts is in effect; fruit movement out of the quarantine area is prohibited. This quarantine covers residential and commercial properties. Businesses handling any of the hosts are required to sign compliance agreements.

Public information staff are creating and distributing a number of documents to educate the public and media about the Medfly. They are also creating documents to support the efforts of trapping, control, and regulatory activities. Radio, print, and television ads are running to remind residents and businesses about fruit movement. A public availability session was held to help inform and educate the residents of Palm Beach County about the Medfly and program activities. In general, the public is very accepting of program activities.

Eradication can only be declared after three life cycles of the Medfly pass without an additional detection. The current three-life-cycle (20 days per generation, based on temperature) extends through August 31, but could change depending on new finds or temperature changes.



The Medfly is considered the most serious of the world's fruit fly pests due to its potential economic harm and threat to the food supply. It attacks more than 250 different fruits, vegetables, and nuts, including oranges, grapefruit, lemons, apples, guava, mango, tomatoes, and peppers. The flies' eggs are laid in the fruit and develop into maggots, causing the fruit to rot. They then emerge as adults once the fruit falls to the ground. Medflies breed continuously when host fruits are available. Population growth may be explosive, as an individual female fly is capable of producing hundreds of eggs.

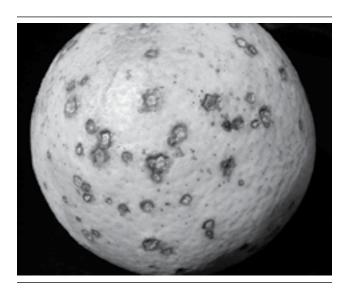
Citrus Black Spot

Citrus black spot, *Gignardia citricarpa*, was identified in a Collier County citrus grove in March 2010. An inspector from the Division of Plant Industry's Citrus Health Response Program (CHRP) found the infection on Valencia oranges. Laboratory analyses at the division's plant pathology laboratory confirmed the infection to be citrus black spot.

Federal and state agriculture officials joined forces and conducted delimiting surveys around the area of the find. CHRP program

staff met with area growers to ensure that no plant material was moved from the area. Investigations are under way to determine the origin of the suspected infection.

Citrus black spot is a fungal disease marked by dark necrotic spots or blotches on the rinds of fruit. It produces early fruit drop, reduces crop yields, and, if not controlled, renders the highly blemished fruit unmarketable. While all the commercial citrus cultivars are susceptible to citrus black spot, most vulnerable are lemon and late-maturing citrus varieties like Valencia followed by grapefruit.



Citrus black spot (CBS) has long been on the radar of Florida agricultural officials because of its capacity to blemish fruit and reduce yield. If confirmed, this find marks the first report of this fungal pathogen in North America and constitutes a major jump in the geographical range of the pathogen. Until this suspected discovery, the nearest known infections were in Argentina and Brazil. The citrus black spot fungus disfigures the citrus peel, but does not affect the quality of the fruit.



Mikania micrantha

Mikania micrantha was found recently in the Redlands area of Miami-Dade County. It has not been previously reported in the United States. Like Old World creeping vine of Kerala, if left uncontrolled, it could quickly change the Florida landscape. Survey and management programs are under way.

Working Groups

Cooperative working groups were assembled this year for laurel wilt/redbay ambrosia beetle, citrus health response program, and *Mikania micrantha*. The working group members included representatives from industry, state and federal agencies, and other associated agencies. Each working group is broken down into three subgroups: research, regulatory, and outreach. These groups meet as subgroups and report back to the main working group on progress in their respective areas. This approach allows the experts from different agencies to work together on common goals.

The CHRP working group was formed to further the benefits of the Citrus Health

Response Program. Their current focus is citrus black spot. Some of specific issues include management recommendations, eradication versus management, phytosanitary standards, decontamination standards, abandoned groves, and regulated area standards.

The Mikania micrantha working group was formed to review the current status of this invasive weed and to chart an effective goforward strategy to mitigate the potential impact. The group continues to discuss issues surrounding survey activities, management challenges, outreach efforts, and resources required to control the weed.

The laurel wilt/redbay ambrosia beetle working group was formed to review the current status of this disease/pest complex and to chart an effective management strategy to mitigate the potential impact of them on the Florida avocado industry in South Florida. A number of research projects for the laurel wilt disease and redbay ambrosia beetle have been under way this year in addition to pest/disease symptom surveys and outreach programs including the unique "Save the Guac" campaign. For more information on the outreach program, visit www.savetheguac.com.

Pest Eradication and Control

The Bureau of Pest Eradication and Control (PEC) assists in detection and response activities associated with harmful plant pests and diseases, particularly those affecting citrus. The bureau operates statewide from its headquarters in Winter Haven and four field offices located in citrus-producing regions of the peninsula including Avon

Park, Immokalee, Tavares, and Vero Beach. The bureau performs survey and regulatory activities to carry out the mission of the Citrus Health Response Program (CHRP). This program was developed in cooperation with the Department, the U.S. Department of Agriculture (USDA), and the citrus industry to help mitigate the impact of citrus diseases, of which citrus canker and citrus greening are currently the most significant and devastating to Florida's citrus industry. With industry input and assistance, the cooperative efforts of the Department and the USDA are directed toward short- and long-term management, which will ensure a healthy Florida citrus industry today and in the future. Those efforts include surveying for citrus pests and diseases and monitoring existing disease including citrus canker, citrus greening and its vector, the Asian citrus psyllid (ACP), and citrus black spot (CBS). Regulatory activities continued with compliance agreements and USDA rule changes, and PEC continues the abandoned grove initiative and industry initiatives like psyllid trapping and aerial spraying for ACP/greening.

On March 8, 2010, a high suspect for citrus black spot, Guignardia citricarpa, was found on Valencia oranges in Collier County by a division inspector. This inspector was conducting a grower-requested survey on four grove blocks. A Department plant pathologist confirmed the presence of citrus black spot on March 29, 2010. This confirmation was subsequently confirmed by an APHIS laboratory on April 7, 2010. Delimiting surveys were then conducted, additional sites were found in Collier County, and one site was confirmed in Hendry County 14 miles northeast of the original find. A total of 13 multiblocks have been identified with the disease.

In addition, in early June 2010, Mediterranean fruit flies were discovered in Palm Beach County, and PEC worked with other state and federal agencies in the emergency response to control these pests, which threaten over 250 fruits, vegetables, and nuts.

Abandoned Grove Initiative

Through its CHRP program, the state has been working cooperatively with county property appraisers' offices and property owners to encourage the removal and destruction of abandoned grove properties, offering abatement recommendations and tax incentives. This survey effort involved 31 counties across Florida and identified approximately 80,000 acres of abandoned grove properties. The program continues as individual property owners are contacted and asked to remove or destroy abandoned trees and are offered an agricultural tax incentive to do so if they wish to maintain the properties for agricultural practice.

Commercial Citrus Survey

In cooperation with USDA, all PEC survey and regulatory teams remained focused on commercial citrus groves and the regulation of harvesting operations. Federal counterparts (USDA/APHIS) within the CHRP-regulated packinghouses inspected the fruit on the grading belts for canker lesions and citrus black spot and regulated the movement of citrus fruit for markets beyond Florida's borders.

During fiscal year 2009-2010, 207,392 commercial acres and 5,442 residential properties were surveyed under state CHRP operations. This included more than 30,662



commercial acres surveyed and 3,147 harvest permits issued for fresh fruit export. Pre-harvest certification is required when the fruit is intended for certain foreign market shipments. Working with growers statewide, 27,756 acres were surveyed this season at their request. Surveys surrounding commercial nurseries were also conducted in accordance with regulations in commercial (7,100 acres) and residential (5,000 properties) areas to protect nursery trees from citrus diseases. With the confirmation of citrus black spot infection in Collier County, the bureau responded immediately with a delimiting survey surrounding the detection area. A total of 34,909 acres were surveyed. Survey for the Asian citrus psyllid, the vector for citrus greening disease, totaled 43,011 acres in the Business Plan Share Program, a cooperative program with growers to assist in the control of citrus greening as well as the prevention of its spread.

The bureau, in cooperation with USDA, surveyed 63,952 commercial acres selected by USDA under their multiple-pest survey project targeting exotic citrus pests and diseases. This survey usually looks for citrus canker, citrus greening, and the Asian citrus psyllid, but was expanded this season to include citrus black spot, which was found earlier this year, and other exotic citrus diseases such as leprosies and citrus variegated chlorosis, which are not known to occur in Florida.

Psyllid Trapping and Aerial Spraying for Asian Citrus Psyllid/Greening

The bureau assisted in two industry initiatives this year: the psyllid-trapping program and test aerial spray programs. The psyllid-trapping program continued in Indian River, St. Lucie, and Martin counties to detect and monitor psyllid populations. The test aerial spray program continued in the Gulf Coast and Indian River areas to test the effectiveness of aerial spraying on psyllid populations. These efforts were conducted to help control and manage citrus greening disease. A total of 43,011 acres was surveyed this year for the detection of citrus psyllids and to monitor the movement of the pests and incidence of citrus greening disease.

Regulatory

The regulatory branch enforces state statutes and works with industry to control and limit the artificial spread of pests and diseases such as citrus canker and citrus greening. Regulatory oversight includes registering companies to ensure they are aware of current rules related to the movement of regulated items and the require-

ments for decontamination to control the spread of disease for the protection of Florida citrus. Regulated articles include host plants and host plant parts (including branches, roots, fruit, and seeds), exposed equipment, and disease vectors.

Since November 2007, the bureau had operated under USDA's Citrus Fruit Movement Final Rule. Under this federal rule. fresh fruit for shipment to non-citrus-producing states was revised to be inspected in compliant packinghouses, treated with an approved disinfectant, and found free of visible citrus canker symptoms. Shipment to citrus-producing states was prohibited. On October 22, 2009, these regulations changed with the publication of an updated USDA Final Rule. These changes resulted from scientific findings that there is no significant risk of spreading citrus canker disease through the movement of symptomatic fruit. The new regulations eliminated the requirement that citrus fruit be inspected and found free of citrus canker symptoms, and removed the ban on shipping to citrusproducing states and territories. The new regulations did retain requirements, though, that interstate shipments of citrus fruit must be free from leaves and long stems and be treated and packed in a commercial citrus packinghouse operating under a current compliance agreement with USDA/APHIS. Homegrown fruit are subject to the same regulations, and some packinghouses did accept homegrown fruit for processing. PEC continues to accept Applications for Participation, a requirement for all growers who intend to ship fruit to the European Union (EU). EU regulations require citrus groves to be inspected and found free of citrus canker disease symptoms prior to harvesting fruit for export.

Due to the citrus black spot finds, the regulatory section issued Emergency Action Notifications to grove owners with diseased trees and to processing plants receiving fruit from these groves. Additional regulatory activities included decontamination and tarping activity, monitoring in affected groves, and monitoring of cleaning and decontamination activities of citrus fruit trailers at all processing plants. Compliance agreements are being revised for the approaching harvesting season to include new regulations in regard to citrus black spot disease.

Although citrus black spot disease has only been found in two South Florida counties to date, citrus greening disease and its vector, the Asian citrus psyllid, have been found in all of Florida's citrus-growing counties, prompting USDA to quarantine the entire state for citrus greening and the Asian citrus psyllid, in addition to citrus canker disease. The latest update on citrus greening and Asian citrus psyllid quarantines is contained in a new USDA/APHIS Interim Rule, which was published and made effective on June 17, 2010.

Regulatory continues to help monitor the spread of disease while gathering management data through its regulatory programs the Citrus Greening and Canker Survey and the Business Plan Share Program. These projects have the potential to provide valuable feedback to citrus growers over the next few years.

The survey project is a joint venture designed and implemented in cooperation with the University of Florida's Institute of Food and Agricultural Sciences (UF-IFAS), USDA National Agricultural Statistics Ser-

vice, and Florida Department of Citrus. This initiative gathers data from a sample of growers to project a statewide estimate of the incidence of citrus canker and citrus greening disease and grower management practices in relation to citrus greening and its vector, the Asian citrus psyllid. The results of the initial survey, from September 1, 2007, to August 31, 2008, were published by UF-IFAS in September 2009. The survey findings indicated that the infection rate for citrus greening in oranges was 1.6 percent statewide, while the infection rate for citrus canker in oranges was 15 percent statewide. In addition, the survey indicated that growers statewide who scouted for greening disease in orange groves did so at an average of two times per year, and growers statewide also applied pesticides to control psyllids on orange groves an average of four times per year.

The Business Plan Share Program was created to assist growers in monitoring and controlling disease by providing scouting and sampling activities in groves for grove owners who volunteer to participate. Under this program growers share their current business plan information with the division and the division agrees to scout one or more test blocks on a recurring basis for endemic and exotic pests and diseases. Samples are taken for analysis and individual test results are made available to the participating grower. The Division of Plant Industry anticipates that field observations and data collection efforts will lead to statistical reports and regional pest incidence and disease management information of notable significance to the citrus industry. This program also offers data management and communication support services.

The 2007 compliance agreements continue to be in effect, allowing flexibility for growers as they develop customized disease management programs. Compliance agreements are issued to citrus growers, caretakers, citrus harvesters, handlers, processors, and citrus packers to ensure that these companies or individuals are registered with the Department and are aware of the rules. The grower compliance agreements also include a fresh fruit application, which is required in order to ship fruit to restricted foreign markets such as the European Union.

Other documents are also issued to citrus growing and handling companies in order to control the movement of regulated articles as required, including stop-sale/hold orders, emergency action notifications, and special permits. Reports of violation are issued for non-compliance, with penalties that range incrementally from a one-time administrative warning to a \$5,000 fine and revocation of the violator's compliance agreement. During the 2009-2010 fiscal year, 57,776 inspections were performed and 205 compliance agreements, one violation, and 3,147 harvesting permits were issued.

Public Relations and Education

The bureau works to keep the public and industry informed of its activities and services as well as to provide up-to-date information on current rules and requirements affecting the citrus industry. Presentations, industry updates, newsletters, print literature, web sites, direct mail, on-site training, and inhouse training have been provided. Some of the subjects covered included decontamination, disease detection, self survey, and current citrus issues. A number of these

outreach programs are in cooperation with UF-IFAS and USDA.

The effectiveness and success of the bureau's activities depend on sharing of program information and activities with industry, general public, and other stakeholders. The division continues to seek their input and direct participation to carry out its mission to detect and control pests and diseases of citrus.

In summary, the Bureau of Pest Eradication and Control's function is one of support of Department efforts to ensure a healthy sustainable citrus industry into the future through survey and sampling, regulatory oversight, training, public education, gathering and reporting data for research efforts, and working in conjunction with other bureaus and agencies on behalf of Florida's citrus industry.

Citrus Budwood Registration

The Bureau of Citrus Budwood Registration regulates citrus budwood distribution in Florida's commercial citrus nurseries. Testing propagative material and maintaining protected foundation budwood clean stock is fundamental to keeping graft-transmissible diseases out of Florida nurseries; it is fundamental to providing growers with clean stock to plant. The citrus nursery industry has made significant investments in nursery infrastructure to safeguard nursery stock from threatening pathogens. Inspection and testing by the division complement industry efforts to manage disease threats. The combination of proper structures, management, clean stock, and regular monitoring are effective in growing disease-free

trees. Major advancements in the technology of laboratory equipment has allowed for greater sensitivity in testing for plant pathogens.

The Chiefland Budwood Foundation facility has approximately 1.5 acres of secure greenhouse growing areas that are used to provide registered nurseries with clean stock material. Nurseries must obtain their original source stock from the Chiefland Foundation. Citrus nurseries can then establish their own scion or increase source material from the foundation stock. One key to the entire process is maintaining the proper identity of each propagation every step of the way. All nurseries must report all citrus propagation to the budwood office on Bud Cutting Reports that identify the source of all propagations and their locations within the nursery. These reports can be used to trace source material back to original parent sources. Budwood cutting in Florida nurseries amounted to 3 million bud eyes for fiscal year 2009-2010. The Chiefland Budwood Foundation cut and distributed 241,650 bud eyes for industry use this year. Since the beginning of the budwood program, more than 13 million bud eyes have been distributed from foundation trees bringing in over \$892,000 in revenue.

The 241,650 bud eyes cut from Chiefland this year represented an 82 percent increase from the amount cut last year. This amounts to 8 percent of the total industry demand for budwood and represents the highest demand for foundation budwood in recent memory. Budwood sales from Chiefland brought in \$55,396 of revenue to the division. One hundred and thirty-five different clones were cut this year and distributed to 36 different customers, includ-

ing 29 nurseries. Budwood was cut on 78 days with 185 separate Bud Cutting Reports processed.



The lowest temperature recorded outside the Chiefland greenhouse during the winter of 2010 was 15 degrees. Approximately 6,360 gallons of LP gas was burned this year to keep greenhouse temperatures above 50 degrees. The Citrus Budwood Technical Advisory Committee met once this year in the Chiefland conference room, and the Division of Plant Industry held two staff meetings at Chiefland this fiscal year.

Currently, 1,091 spaces are planted at Chiefland. This is an increase of 120 trees from last year. Extra tree spaces were obtained by planting many of the new selections closer together in the rows, as close as a foot and a half apart. The planted trees represent 338 different clonal selections. Some older clones were removed from the planting and new clones added, resulting in a net increase of 17 clones. The Chiefland foundation planting is 35.7 percent sweet orange (389 trees), representing 83 different sweet orange varieties. Mandarins make up 28.9 percent of the planting (315 trees), representing 82 varieties. Grapefruit is represented with 100 trees of 26 varieties and consists of 9.2 percent of the planting.

The Chiefland greenhouse structure and trees are inspected every day by on-site staff. Another monthly inspection is performed by plant industry nursery inspection staff. Close monitoring is important to prevent breeches in the structure that could jeopardize the clean stock. Visitors are not permitted access to the growing areas of the Chiefland facility, although a small viewing window is present to allow the curious a glance inside.

Twenty-eight new varieties were planted at Chiefland this year. New varieties must be grown and fruited out before an official industry release. Researchers frequently plant new varieties in trial plantings before official release, so attributes and characteristics under Florida growing conditions can be more fully known. New varieties enter the budwood program by three different means. Varieties coming from outside Florida must enter through the Citrus Germplasm Introduction Program (CGIP) for guarantine and pathogen testing before being taken to Chiefland. Research agencies and instate breeding programs are continually developing new scions and rootstocks specifically for Florida's needs. New varieties originating from Florida research agencies enter through the budwood program and are tested in the division's Winter Haven laboratory and biological greenhouses, and are usually shoot-tip grafted to remove any pathogens. Citrus growers can also enter varieties into the parent tree program, and they have been responsible for entering many new selections from better-yielding trees or unique finds in their groves. Thirtyfour new selections entered the budwood program's parent candidate program this fiscal year, and 48 different shoot-tip grafted selections were released.

Improvements in the shoot-tip grafting laboratory include the acquisition of two new microscopes. The first scope has higher magnification and better optics than the bureau's previous equipment for performing the shoot-tip grafting. The second scope is a teaching microscope used to teach shoot-tip grafting techniques to employees and visiting scientists from other programs, and for team projects.

The number of commercial citrus nursery propagations was lower this year by 763,073 or 20 percent. Florida nurserymen made 3,001,186 propagations in 2009-2010. The decline in nursery production is attributed to fewer sweet oranges being propagated, as every other citrus type saw increased production in 2009-2010. While sweet orange propagations were down by 957,104, grapefruit and mandarin propagations increased in both number and percentage of the propagations. Grapefruit accounted for 7.4 percent of all propagations, compared to 4.7 percent last year. Mandarins accounted for 8.3 percent of propagations, compared to 4.1 percent last year. Sweet oranges declined from 89 percent of the propagations to 79.7 percent this year.

The average nursery made 67,000 propagations this fiscal year. Forty-one percent of Florida's nursery trees are produced in Polk County, where the budwood office and the majority of the citrus nursery inspectors are headquartered. One hundred seventy-two different clones representing 148 different varieties were propagated this fiscal year. Although the citrus industry utilizes only a handful of varieties in commercial plantings, the dooryard (homeowner) market employs a greater assortment of citrus types. It is estimated that 10 percent to 15 percent

of the total reported nursery propagations are destined to be doorvard trees. Valencia and Hamlin were the top two varieties propagated, making up 37 percent and 33 percent of nursery propagations, respectively. Midsweet was the third most popular variety at 3.3 percent of nursery propagations, followed by Ray Ruby grapefruit at 3.2 percent, Glen Navel at 3.0 percent, and Ruby Red grapefruit at 2.3 percent. Murcott was the most popular mandarin-type propagated, followed closely by Mineola. Swingle was the most popular rootstock used for budding. This is the 22nd year that Swingle has been the top-utilized rootstock. Nursery trees on Swingle account for 45 percent of all propagations. Kuharske citrange and Carrizo citrange were the second and third most utilized rootstocks. accounting for 17 percent and 14 percent of propagations, respectively. Sour Orange and Cleopatra mandarin were the next most popular rootstocks at 7.5 percent and 3.5 percent, respectively, followed by X-639 at 3.1 percent, Kinkoji at 2.7 percent, and Volkamer lemon at 2.2 percent.

The Bureau of Citrus Budwood Registration conducted 44,299 pathogen tests in 2009-2010. Every program foundation and scion source tree is tested annually for citrus tristeza virus and citrus greening. Testing for other pathogens occurs on a routine basis, with a different pathogen focus each year. This year, citrus tatter leaf virus and citrus psorosis virus were tested for in-program sources. A paper titled "Increased Efficiency and Sensitivity for Identifying Citrus Greening and Citrus Tristeza Virus using Real-time PCR Testing" was published in 2009 by bureau laboratory personnel in the Proceedings of the Florida State Horticultural Society.

All nursery budwood sources are required to be grown in protected greenhouses that have to be approved by the Division of Plant Industry, while seed source trees can be field grown. Scion trees are responsible for providing 50 percent of the propagation material for citrus nurseries, with the average scion tree producing 784 bud eyes. Increase trees, those which can originate from either foundation or scion trees, accounted for 42 percent of nursery propagation material. Qualifying increase trees, those originating from foundation trees, can be converted to scion trees by being witnessed and tested for pathogens. The bureau witnessed 1,276 scion trees this fiscal year: 1,171 budwood scion and 1,105 seed source trees. The total number of scion trees in the program stands at 9,529, of which 5,722 are budwood scion and 3,807 seed source. Source tree registration revenue amounted to \$38,985 for the fiscal year.

The first find of citrus canker in the Florida Citrus Arboretum was in March 2010. The find was on the outside row of grapefruit trees. To protect the remainder of the arboretum, three rows of grapefruit have been removed. The first find of citrus greening in the arboretum, which was one of the first finds in Polk County, was in August 2007. Removal of trees with citrus greening in the arboretum has also been aggressive. The first year, two trees were identified with citrus greening or huanglongbing (HLB) and removed (fiscal year 2007-2008), followed by two trees in the second year (fiscal year 2008-2009). Eleven trees were found positive and removed from the arboretum in the fall of 2009 (fiscal year 2009-2010), followed by an additional four trees in the spring of 2010 (fiscal year 2009-2010). Twenty-three trees were reset in the arboretum in 2010, and 16 were reset the previous year.

The Dundee foundation facility, which has not been used for budwood cutting since 2005-2006, has been taken over by the Bureau of Methods Development and Biological Control. Dundee barns and greenhouses are being renovated for a biological control rearing facility for parasites of the Asian citrus psyllid. This use of the facility should help in the industry's battle against citrus greening.

Methods Development and Biological Control

During this past year, the Bureau of Methods Development and Biological Control was involved in several cooperative biological control programs, as well as technology transfer and other supportive functions for the division.

Rearing Programs for Biological Control Agents

Caribbean Fruit Fly

The Biological Control Rearing Facility (BCRF) continued production of the Caribbean fruit fly, *Anastrepha suspensa* Loew, rearing approximately 64 million flies. Various life stages were supplied to researchers and cooperators at the University of Florida and the USDA. Additionally, sterile adult flies were used for sterile insect technique (SIT) initiatives in conjunction with the state's Caribbean Fruit Fly Protocol Program to lower the wild population levels in key commercial fruit growing areas.

Diaprepes Root Weevil

Mass rearing of Diaprepes root weevil, Diaprepes abbreviatus (Linnaeus), continued



at the BCRF to provide various life stages to researchers developing control strategies for this pest. During this reporting period, more than 8,000 eggs, 25,360 neonates, 984 grubs, 120 pupae, and 1,965 adults were shipped to nine different researchers.

Diaprepes Root Weevil and parasite Quadrastichus haitiensis

Biological control of Diaprepes root weevil, *Diaprepes abbreviatus*, was initiated in 1969 by the introduction of the parasite *Quadrastichus haitiensis* (Gahan) from Puerto Rico. Mass-rearing methods were developed and field releases of this parasite were started in late 1998. At present, the parasite has been established in several locations in Miami-Dade and Broward counties. During fiscal year 2009-2010, 1,246,500 *Q. haitiensis* were sent to 23 cooperators in Florida.

Imported Fire Ant (Solenopsis invicta) and Phorid Flies (Pseudacteon sp.)

Mass rearing of the phorid flies *P. tricuspis* Borgmeier, *P. curvatus* Borgmeier, and *P. obtusus* Borgmeier continued at the BCRF as part of a joint venture with the USDA

to release these parasitoids as biological control agents against the imported fire ant (IFA), Solenopsis invicta Buren. A fourth phorid fly, P. cultellatus Borgmeier, was also recently transferred to the BCRF from the USDA and, if rearing progresses well, should be ready for release within a year. This endeavor encompasses personnel and resources from FDACS-DPI, USDA-ARS, and USDA-APHIS, as well as several other agencies in many southern states. The majority of funding for this project continues to be provided via a cooperative agreement with USDA-APHIS. Up to 14 specially designed attack boxes are online, and over 2.9 million flies of all species combined were produced this past fiscal year.

The USDA-APHIS Gulfport Laboratory in Mississippi continues to coordinate field release efforts with various federal and state cooperators. This past year, DPI's facility supplied P. tricuspis to four states, P. curvatus to five states, and P. obtusus to four states for release or research purposes. In the coming year, the distribution of all three phorid species to IFA-infested states will continue. It is expected that these phorid flies and additional species will become successfully established throughout the entire southeastern U.S. within the next several years. These phorid flies will work together to help suppress the IFA because each species attacks different size worker ants at different times of the day. This allows for a reduction in pesticide usage and gives native ant species and other insects, as well as ground nesting-birds, reptiles, amphibians, and mammals an opportunity to re-establish themselves in numerous environmental niches.

Pink Hibiscus Mealybug Biological Control Program

A cooperative agreement initiated in 2005 with USDA continues to support a regional mass-rearing facility for parasites of pink hibiscus mealybug (PHM), Maconellicoccus hirsutus (Green). These biological control agents are released in Florida and other regions to control the spread of PHM. The PHM biological rearing facility produced a total of 2,243,567 parasites (*Anagyrus* kamali Moursi and Gyranusoidea indica Shafee, Alam, and Agarwal). In fiscal year 2009-2010, there were 13 counties in Florida that received parasites for release. Since 2005, 32 counties in Florida, two counties in Texas, and several locations in Jamaica and the Cayman Islands have received parasitoids for control of this invasive pest.

During this period, several crops of Japanese pumpkin, the preferred host of PHM, were grown in cooperation with the University of Florida. The pumpkins were grown in mulched, raised beds with drip irrigation at IFAS facilities in Citra, and in 20-gallon pots at the DPI Methods field office located at the State Farmers' Market in Fort Pierce during the winter months. The crops were successful, producing 4,562 Japanese pumpkins weighing a total of 17,173 pounds.

Tropical Soda Apple Biological Control Program

This program, funded through a cooperative agreement with USDA, supports the mass rearing of the leaf-feeding beetle *Gratiana boliviana* Spaeth (Gb) for release as a biological control agent of the weed tropical soda apple (TSA), *Solanum viarum* Dunal. During fiscal year 2009-2010, 20,391

adult beetles were reared at this facility and released in 19 counties throughout central and north Florida to assist in the control of TSA. An additional 1,137 Gb of various life stages were given to other scientists for further research on the insect.

As has been noted in previous reports, Gb is becoming well established in southern and central Florida counties and is helping to control TSA in these counties. However, questions still remain as to how effective the beetle is in controlling TSA in the northern third of the state. To help answer this question, 4,287 adult beetles supplied by DPI were released by the USDA-ARS in the summer of 2009 at a ranch in Madison County that had a considerable amount of TSA. Counts of Gb were taken during the spring and early summer of 2010. The data is being evaluated to try to determine what percentage of adults overwintered in that northern part of Florida. Gb has also been released in several other northern counties as well. Evaluation of these release sites is planned for late summer of 2010 to further evaluate the effectiveness of Gb bio-control of TSA in these locations. IFAS cooperative extension agents in north Florida were contacted in an effort to identify release sites to help control TSA in that part of the state. In response to this effort, more releases are planned for the summer of 2010 in other northern Florida counties.

West Indian Fruit Fly Biological Control Program

The West Indian fruit fly (WIFF), *Anastrepha obliqua* (Macquart), attacks 74 species of fruit, including mangos, and has one of the broadest distributions of any pest tephritid. WIFF poses a significant threat to fruit

production due to its wide host range and distribution. Although it is not established in the continental United States, WIFF has been trapped in the Florida Keys, the Rio Grande Valley in Texas, and in San Diego, Orange, and Los Angeles counties in California. The populations in the Caribbean threaten the southeastern United States.

Three parasitoid colonies, Diachasmimorpha longicaudata (Ashmead), Doryctobracon areolatus (Szepligeti) and Utetes anastrephae (Viereck), were transferred from the USDA Center for Plant Health Science and Technology (CPHST) to FDACS-DPI at the beginning of 2009 in order to facilitate the technology transfer of the rearing methodologies and maintain the colonies until facilities were developed in Puerto Rico. Only the *D. longicaudata* colony thrived with over 380,000 parasitoids being reared before the cooperative agreement ended. The other two colonies were lost due to differing environmental conditions between the rearing facilities and previous contamination. Several attempts at reestablishment via field-collected Caribbean fruit fly-infested fruit yielded some *U. anastrephae* parasitoids, but never enough to produce sufficient progeny for a viable colony.

Cycad Scale

Cycad scale, *Aulacaspis yasumatsui* Takagi, was first identified in Florida in Miami-Dade County in 1996. The infestation had apparently been present for one to two years, or longer. This pest of cycads has since spread to at least 25 Florida counties where heavy infestations have been reported from Alachua to Miami-Dade counties. During February 2002, the Division of Plant Industry collected the parasitoid *Coccobius fulvus*

(Compere and Annecke) from infested cycads in the Naples area and released about 11,000 of these parasitoids in about 15 infested counties extending from the Orlando area south. Unfortunately, surveys during the past three years have indicated that *C. fulvus* from Thailand has not provided the desired level of control of Asian cycad scale populations.

During the continued search for natural enemies of cycad scale funded by UF-IFAS and DPI, Dr. Ren Hui found C. fulvus in Guangdong, China. Specimens of C. fulvus from Guangdong were collected and sent to the Gainesville quarantine laboratory in October 2004. A permit for release from quarantine was granted in June 2005. In early fall of 2005, 2,300 C. fulvus were released in the Gainesville area. Within a year C. fulvus, Chinese biotype, was found to be established in Alachua County. The survey of six locations in Gainesville on November 13, 2007, showed that about 25 percent of cycad scales were parasitized by C. fulvus (range: 1.9 percent to 52.6 percent). No parasites were found in those locations prior to releasing in 2005. Additional shipments of cycad scale and natural enemies were received from Vietnam in March 2006 and from China throughout the fiscal year. A search for the natural enemies of cycad scale in Thailand and North Vietnam was conducted by Dr. Ru Nguyen (DPI) and Dr. Ron Cave (IFAS), in October 2007. Two parasites, Aprostocetus purpureus (Cameron) and Arrhenophagus chionaspidis Aurivillius, as well as a predatory beetle, Phaenochilus sp., were collected during that trip. According to Dr. Natalia Vandenberg, USDA Agricultural Research Service (ARS), Phaenochilus sp. collected was a new species. Host range tests showed that this

lady beetle is a good predator of armored scale such as *Aulacaspis yasumatsui* and magnolia scale, *Aonidiella orientalis* (Newstead), but it does not feed on aphids or mealybugs. Colonies of this ladybug are kept in quarantine laboratories in Gainesville and Fort Pierce. A NAPPO (North American Plant Protection Organization) was submitted to USDA APHIS-PPQ (Plant Protection and Quarantine) in 2010 requesting the field release of this predator. Populations of *A. purpureus* and *A. chionaspidis* died in the quarantine laboratory in January 2008.

Asian Citrus Psyllid

Division personnel discovered Asian citrus psyllid, *Diaphorina citri* Kuwayama, at Boynton Beach, Florida, on June 2, 1998. It had spread to 28 counties by 2001. It is one of the most efficient vectors of citrus greening (huanglongbing). In cooperation with UF/IFAS, two parasites of *D. citri*, *Diaphorencyrtus aligarhensis* (Shafee, Alam and Agarwal) and *Tamarixia radiata* (Waterston) from southern Vietnam and Taiwan, were brought into DPI's quarantine laboratory on October 21, 1998, and a permit for field release of *T. radiata* was granted on July 12, 1999, and for *D. aligarhensis* on March 10, 2000.

In fiscal year 2009-2010, approximately 213,285 *T. radiata* and 23,140 *D. aligar-hensis* were reared and released from the Division of Plant Industry's laboratory. A statewide survey conducted by Dr. Juang-Horng Chong (USDA-APHIS) in 2006 found that *T. radiata* has been established in 23 counties south of Volusia County. However, a study conducted during 2005-2006 by Drs. P.A. Stansly, D.G. Hall, M.E. Rogers, and J.A. Qureshi in 28 commercial citrus

groves across 16 counties in South and Central Florida reported that the average percent parasitism was less than 20 percent in spring and summer. This rate was lower than those in Reunion, Taiwan, Guadeloupe, and Puerto Rico. No hyperparasitoid of *T. radiata* was detected during the survey. *Diaphorencyrtus aligarhensis* has not become established in Florida yet.

The effectiveness of these parasites is monitored on a regular basis and the search for new parasite biotypes in Asia continues. In September 2006, Dr. Ru Nguyen (DPI) and Dr. Ron Cave (IFAS) collected a new biotype of D. aligarhensis in Guangzhou, Guangdong, China. A field release permit of this biotype was granted by US-DA-APHIS-PPQ on June 1, 2007. In July 2007, Dr. Cave and Dr. Nguyen collected T. radiata in Bac-Ninh Province, northern Vietnam. Dr. Rehman collected T. radiata from Punjab Province, Pakistan, in September 2008, and Dr. Phil Stansly (IFAS) collected it in Guangdong Province, China, in November 2008. Those biotypes of T. radiata have been reared in DPI's Quarantine Laboratory in Gainesville. A permit for field release of these biotypes was granted USDA-APHIS-PPQ on July 9, 2009.

The bureau's ultimate goal is to mass-produce natural enemy species of the Asian citrus psyllid in Florida in a Division of Plant Industry facility in Dundee. This facility is currently being retrofitted to comply with rule 5B-62. The biological control agent Tamarixia radiata will be the primary species for mass-rearing. The parasites will be cultured on Asian citrus psyllids, which will in turn be reared on orange jasmine, *Murraya paniculata* (Linnaeus) Jack. Four different biotypes of *T. radiata* will be reared

separately to preserve biotype purity. Then the parasites will be grown on psyllids in another greenhouse compartment. The four *T. radiata* biotypes are: Florida (a genetic mix from southern Vietnam and Taiwan), Pakistan, Northern Vietnam, and China. These parasitoids will be sent to the field for release.

Citrus Leafminer

Ageniaspis citricola Logvinovskaya, a parasite of citrus leafminer, Phyllocnistis citrella Stainton, was imported from Australia and Taiwan and released in May 1994 throughout Florida. This parasite has been established and is widely distributed; it provided good control of citrus leafminer in Florida. The parasitism rates of this parasite in October 1996 were 80 percent on dooryard citrus and 60 percent in commercial groves. However, citrus leafminer populations were high in 2002, especially in young groves. To complement A. citricola, Citrostichus phyllocnistoides (Narayanan) from Spain was brought into the division's quarantine laboratory in July and August 2003. A permit to release C. phyllocnistoides from quarantine was granted in May 2006 and subsequent releases were initiated in Immokalee in June 2006. During fiscal year 2009-2010, 29,920 parasites were released.

Cactus Moth

The BCRF continues rearing the cactus moth, *Cactoblastis cactorum* Berg, as part of a cooperative agreement with the USDA to help combat this recently introduced pest in the southeastern United States. The overall goal of the program is to establish a barrier at the current leading edge of the cactus moth spread utilizing the sterile in-

sect technique (SIT). In SIT, large numbers of sterile or partially sterile insects are mass reared and released to mate with the wild population, producing either no progeny or sterile ones. This barrier will prevent the spread of the cactus moth to the Midwest and western regions of this country and into Mexico. If the geographic range of the moth expands westward, it will cause serious damage to the desert ecosystems and agricultural production of the southwestern United States and Mexico.

The facility reared over 600,000 moths on artificial diet during this past fiscal year and over 279,000 were sent to the field for SIT releases. Investigation of rearing techniques continues for improved disease management and increased production.

Technique Development Laboratory

The Bureau of Methods Development and Biological Control's technique development laboratory has been primarily involved with the collection, irradiation, and shipment of sterile cactus moths for field release under that program's SIT initiative. The focus has been on obtaining the highest-quality moths by streamlining handling procedures to reduce stress and physical damage to the moths during the eclosion and shipping process to produce the most competitive individuals possible.

A standard operating schedule was developed for high-density rearing that is now in effect in the production area. This schedule addresses infest rate, diet changes, sanitation, humidity, and disease management. This schedule was designed for a one-week development cycle from first egg hatched to last pupa collected.

Production of quality sterile (irradiated) adult moths has been the primary focus of this lab. Methods were developed for the conditions and equipment at DPI to allow peak production of adult moths to coincide with anticipated release dates in the field for SIT releases. Quality control measures have been developed and implemented, which improve total adult emergence and overall health of the colony.

Florida Accelerator Services and Technology (FAST)

The linear accelerator modernization and service life extension program was completed in September 2009 with the installation of a new industrial computer that controls accelerator operation. In October 2009, FAST completed a security equipment upgrade funded by the U.S. Department of Energy (DOE), National Nuclear Security Administration, Global Threat Reduction Initiative (NNSA-GTRI). This new equipment enhances the security of the Cesium irradiator by providing 24-hour video monitoring. The DOE-NNSA-GTRI funded alarm monitoring contract will expire in October 2012. In June 2010, the Florida Department of Health's Bureau of Radiation Control renewed the radioactive materials license issued to the Division of Plant Industry. DPI is licensed to possess radioactive materials until June 2015.

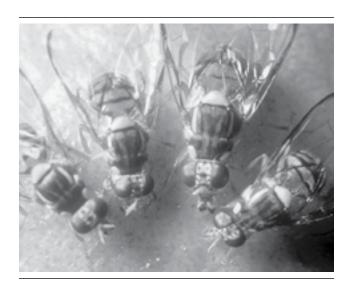
FAST continues to provide electron beam and gamma irradiation services in support of research and biological control programs conducted by FDACS, University of Florida, USDA, and private industry. Products irradiated include: potted plants, plant tissue, citrus budwood, rice and citrus seed, apple snail eggs, and insect diet for the

cactus moth and Diaprepes rearing programs. FAST provided irradiation services for the cactus moth and Caribbean Fruit Fly SIT Programs. It also provided irradiation support to the Division of Aquaculture for a grant funded by the U.S. Fish and Wildlife Service that explored the use of ionizing radiation to control the invasive apple snail. It supported the USDA-ARS in a research project designed to reduce or eliminate the seediness of citrus products and another to increase the disease tolerance of rice. FAST also irradiated silicone substrate for a semiconductor manufacturing company. Notable contributions to agriculture include development of commercial cultivars Epipremnum aureum (pothos) "Pearl and Jade" and "Green Genie," and Philodendron scandens (subspecies oxycardium) "Frilly Philly," all patented by the University of Florida.

Caribbean Fruit Fly Research and Activities

This office maintains three continuous Caribbean fruit fly trap lines using plastic McPhail-type traps in portions of Indian River, Martin, and St. Lucie counties. These traps are serviced weekly and the results, showing number of flies caught by sex as well as species and condition of host plant, are tabulated weekly. This data is used for later reference concerning the variation in the seasonal Caribbean fruit fly population. It supports the Caribbean Fruit Fly Certification Program trapping information on fly populations in urban areas and is useful when conducting tests that involve the use of biological control agents or other suppression/control programs. The data was also given to other agencies, which included it in their larger GIS program. A search for

unknown hosts of the Caribbean fruit fly continues. Many species of ripe fruit collected off the host plant are incubated to see what species of insects develop in the fruit. While no new hosts for Caribbean fruit fly were discovered, new relationships of these fruits to other insects were discovered.



Training and Compliance

Bureau personnel continued to provide training and testing for employees for Restricted Use Pesticide (RUP) Licenses, coordinated employee pesticide license applications, and maintained records of continuing education units (CEUs) for those licenses, provided record keeping for Right-To-Know and Material Safety Data Sheet (MSDS) files, coordinated disposal of hazardous chemicals produced at the division, and provided security/monitoring of the Gainesville facilities.

Fumigation/Miscellaneous Activities

Fumigation of specimens, books, and reprints for the Florida State Collection of

Arthropods continued at the DPI, Gaines-ville, and University of Florida fumigation chambers. Annual evaluations and certifications of methyl bromide fumigation chambers used for blueberry fumigation were conducted during this period. Personnel conducted bioassays and bulk density determinations to comply with imported fire ant program regulations. Bureau personnel often aid with document translation and tours of facilities for domestic and foreign visitors as well as daily oversight and support to employees and community organizations using Doyle Conner Building facilities.

Plant and Apiary Inspection Plant Inspection

At the end of fiscal year 2009-2010, there were 8,570 nurseries (10,611 block locations) with total inventory of 500,176,088 plants classified as nursery stock. There are 3,880 nursery stock dealers (8,795 outlet locations) registered with the Department. Inspectors made 21,470 inspections of nursery and stock dealer establishments. As a result of these inspections, 127,329 plants were quarantined. There were 9,893 federal and 4,927 state certificates issued for shipments of plants and plant products exported from Florida.

Department personnel inspected 32,018 shipments of plants and plant products imported into Florida from other states and countries, including 998 shipments of nursery stock. These inspections resulted in 331 (146 for nursery stock) regulatory actions for plant pests of quarantine significance. A total of 4,172 soil and root samples were collected and analyzed spe-

cifically for burrowing nematodes as required by the Burrowing Nematode Certification Program. The Burrowing Nematode Certification Program has 1,197 ornamental nurseries under certification as of June 30, 2009.

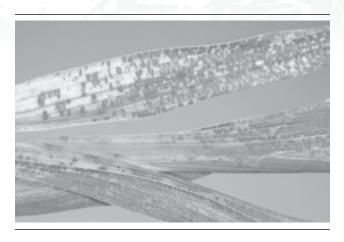
DPI personnel tended 189 gypsy moth traps in North Florida. Other seasonal traps include 11 boll weevil traps, 32 European corn borer traps, and 100 emerald ash borer traps. DPI personnel tended 17,990 Jackson traps and 2,015 multi-lure traps on a three-week basis. They tended 3,066 Jackson traps and 1,910 multi-lure traps on a two-week basis. In addition, USDA personnel tended 24,022 Jackson traps and 5,310 multi-lure traps, bringing the total number of traps statewide to 54,313.

Commercial Citrus Nursery Inspection Program

As of June 30, 2010, there were 55 citrus propagating nurseries certified and inspected on a 30-day cycle representing 266 greenhouse structures. There are 36 locations that are identified as commercial (certified free of burrowing nematode) citrus nurseries. Additionally, there were four own-use, eight research only, three dooryard, and four commercial/dooryard citrus nurseries. Commercial citrus nurseries are inspected by six commercial citrus inspectors. These inspectors are restricted from inspecting more than one nursery per day to prevent transport of citrus diseases/pests between nurseries.

Gladiolus Rust

Uromyces transversalis, the causal agent of gladiolus rust (GR), is an obligate parasite



that only grows and reproduces on members of the family Iridacea, including *Gladiolus*, *Tritonia*, *Crocosmia*, and *Watsonia* spp. GR was confirmed to be present in the United States in April 2006. As of June 30, 2010, regulatory actions and eradication efforts continue at two locations in a cooperative effort between USDA and the Division of Plant Industry. Inspectors have spent 8,597 hours conducting surveys and control measures for gladiolus rust.

Violations, Stop-Sale and Hold Orders

Between July 1, 2009, and June 30, 2010, Division of Plant Industry personnel issued two administrative complaint letters and inspectors issued three complaints of violation. None of these violations resulted in monetary penalties. There were 955 stopsale and hold orders for failure to renew annual registration. During the same period, 712 stop-sale and hold orders have been released as a result of fee payment or going out of business. Bureau personnel also issued 24 stop-sale and hold orders for pests and diseases such as citrus canker, citrus greening, pink hibiscus mealybug, violation of Division Rule (5B-62 citrus nursery propagation rule; and 5B-63 declares citrus canker, greening, and ACP plant pest and

nuisance), Florida Administrative Code, and restricted aquatic plants.

Caribbean Fruit Fly Certification Program

The Caribbean fruit fly is a serious pest of many tropical and subtropical fruits of Central and South Florida. The fly-free zone certification protocol was developed to certify citrus fruit as free of Caribbean fruit fly larvae. Bermuda, Brazil, Colombia, Ecuador, Japan, Korea, New Zealand, the Philippines, Thailand, the People's Republic of China, Vietnam, and the states of California, Hawaii, and Texas have accepted this certification procedure, which is fully funded by grower assessments. Fruit shipped to these areas must originate in specific Caribbean fruit fly controlled or designated areas in citrus-producing counties approved for shipment of fruit.

In the 2009-2010 season, 106,880 acres were certified in 22 eligible counties. The protocol establishes a safe and effective procedure for exporting citrus to areas requiring quarantine safeguards. Japan is currently the largest importer of fresh Florida grapefruit. This season, 6,517,239 cartons of citrus fruit were shipped to Japan under the protocol certification program.

Boll Weevil Eradication

At the close of the 2009 cotton-growing season, there were 273 commercial cotton producers in the state. These producers planted 80,915.11 acres of cotton in 13 counties, an increase of 15,574.41 acres from the 2008 growing season. Throughout the 2009 cotton-growing season, there was no boll weevil trapped in the state.

Imported Fire Ant Certification Program

As of June 30, 2010, there were 1,249 nurseries and stock dealers under compliance agreement for imported fire ant (IFA) certification purposes. This compares to a total of 1,249 nurseries and stock dealers under compliance on June 30, 2009. During this period, plant inspection personnel spent 13,680 hours associated with IFA activities.

Aquatic Harvest Permitting

The Division of Plant Industry has regulatory authority of permitting for the importation, transportation, cultivation, collection, sale, or possession of any aquatic plant. Non-prohibited aquatic plant harvesters are now required to be registered as a nursery and sign a compliance agreement/permit to harvest non-prohibited aquatics. As of June 30, 2010, the division issued nine aquatic harvesting permits. The division currently has 33 active nurseries under compliance.

Native Flora Harvesting Permitting

Harvesting endangered and commercially exploited plants requires individuals to have a permit issued by the Division of Plant Industry. Between July 1, 2009, and June 30, 2010, the division issued 80 permits compared to 71 permits issued during the same period last year.

Compliance Agreements

Compliance agreements are used by the Department to bring establishments into compliance with applicable requirements for handling regulated materials. Each compliance agreement is reviewed and signed off by the regulated establishment once a year.

Between July 1, 2009, and June 30, 2010, there were 52 different types of compliance agreements completed by 2,823 establishments.

Apiary Inspection

Registered Florida Beekeepers

2009-2010
Florida Registered Beekeepers 1,719
2008-2009
Florida Registered Beekeepers1,337
2007-2008
Florida Registered Beekeepers 1,000*
*approximately

The number of registered commercial beekeepers in Florida has increased 72 percent since 2007. This is a significant rise in beekeepers attributed to the increased interest in recreational beekeeping.

Honey Bee Colonies in Florida

Honey Bee Colonies Maintained273,254
Honey Bee Colonies Seasonally
Transported out of State123,940
Number of States Bees Shipped to 25
Honey Bee Colonies Entering the
State of Florida 152,710
Number of States Shipping Bees into
Florida

Commercial Beekeeping

The commercial professional apiculture (beekeeping) industry has for the short term adapted to the following pests and diseases:

1. Colony collapse disorder (CCD) has caused significant unanticipated honey bee colony losses. Honey bee total colony losses over the 2009-2010 winter were 34 percent, with a 30 percent average over the

ANNUAL REPORT 2009 / 2010

SUPPORTING FLORIDA AGRICULTURE



last three years. This is a stressful business model for beekeepers. At this time honey bee biology and astute beekeepers can replace these losses temporarily. This system is different from cattle, swine or poultry losses. As an example, if a commercial beekeeper has 1,000 individual honey bee colonies, and over the course of 12 months 500 of them die, the remaining 500 can be divided in half, returning the inventory number to 1,000. Now instead of having 500 stronger honey bee colonies, the beekeeper has 1,000 weak colonies. Each of the colonies then requires a growing period, which causes a delay in its monetary value as a pollination unit or honey production unit. This is an unsustainable business model, but may be the current contemporary model to survive. The tipping point

may be when there are fewer colonies to divide than the number lost.

- 2. Varroa mites (an invasive pest from Asia) are a robust external parasite of honey bees and a vector of viral infections that continue to negatively impact honey bee colony health. Chemical treatments can temporarily reduce varroa populations, but create collateral damage. In the broadest sense, killing a small insect (varroa) on a large insect (honey bee) is extremely difficult, if not impossible without sub-lethally damaging the large insect (honey bee).
- 3. Nosema ceranae (an invasive pest from Asia) is a digestive tract system-destroying micro-sporidian. Historically Nosema apis and different Nosema species were known and consistently controllable by beekeepers. Nosema ceranae are not as responsive to control measures.
- 4. Israeli Acute Paralysis Virus (IAPV) is an introduced virus of honey bees closely related to the Kashmir Paralysis Virus. It has been found to be associated with colony mortality.

Recreational Beekeeping

As noted in the opening figures, the interest in honey bees and beekeeping has increased remarkably over the last several years. Local and regional beekeeper associations have multiplied. The Apiary Section's regulatory services and its educational outreach training have increased in parallel with new beekeeper registrations.

Pollination, Fee-Based Model

Florida's leadership in fruit, vegetable, and

berry production is dependent on managed honey bee pollination. Without a vital, active, and healthy managed honey bee industry, the production of strawberries, blueberries, watermelons (even seedless), citrus, avocado, lychee, cucumbers, squash, and a host of other agriculturally important products would suffer. In addition, incidental honey bee pollination of fruits, nuts, seeds, and berries that support Florida's environment and wildlife would be negatively impacted. Florida registered beekeepers and visiting beekeepers provide this direct benefit.

The state of Florida serves as a honey bee nursery for tens of thousands of honey bee colonies from all over the United States from September through March. Colony losses during the summer migratory pollination season are addressed by dividing the remaining live honey bee colonies to make up losses. This is an intense management time for commercial migratory beekeepers as they prepare for the next fee-based pollination season. Without this market, the commercial industry would shrink significantly. After migratory colonies finish almond pollination in California in March or early April, these beekeepers may travel to Washington or Oregon for fruit pollination, or back to Florida to solidify colony numbers for the following spring migration, as they move north. Blueberries, strawberries, apples, peaches, cranberries, pumpkins, and cherries are awaiting pollination from Florida to Maine.

Honey

Production of bulk honey as a commodity is a precarious agricultural business. Unsupported honey prices mean a fluctuat-

ing global market price dictates prices. It is not a consistent or dependable market. Many commercial beekeepers participate regardless of prices to generate cash flow, not profit. Honey on the wholesale market is an agricultural commodity. Commodity sales always go to the low-cost producer.

Apiary Research Activities

Varroa Control

- Field tests of an organic acid, formic acid, formulated for quick delivery from a specialized packet was accomplished. The goal was to improve the efficacy of this varroa control product in the challenging heat and humidity of Florida using a chemical having no harmful residues. Collaboration with UF-IFAS and NOD, a private sector Canadian company.
- Moved forward with gene sequencing of varroa to target varroa protein synthesis.
 Using RNAi technology to disrupt varroa protein synthesis as a control strategy.
 Collaboration with UF-IFAS, USDA-ARS, and Beeologics, Inc., a private-sector company.

Israeli Acute Paralysis Virus (IAPV) Control

 Successful completion of field trials with a research paper being published this fall describing IAPV control using RNAi. Collaboration with UF-IFAS, USDA-ID, and Beeologics, Inc.

Honey Value

 Analyzed Florida mono-floral honey(s) for naturally occurring, medicinally valuable

compounds that would add value to Florida honey. Collaboration with UF-IFAS Food and Nutrition Department.

Queen Replacement Rates

- "Effects of Honey Bee Queen Insemination Quantity on Supersedure Rates in Florida." The honey bee queen's quantity of stored semen determines supersedure (replacement) rate. Collaboration with North Carolina State University.

African Honey Bee

- Increasing African honey bee awareness via the African Honey Bee Extension and Education Program (AFBEE), Dr. Jamie Ellis, UF-IFAS.
- African Honey Extension Education, Dr.
 William H. Kern Jr., UF-IFAS.

The feral population growth, public safety concerns, and protection of the apiculture industry are all intersecting to try to soften direct impacts of African bees. The African bee is an invasive that will dominate the feral environment of Florida and the southeastern United States. Currently, the African bee is multiplying its population from a line from the east to the west coast of Florida bisecting Orlando. Stinging incidents with people, pets, livestock, and wildlife are increasing as expected. As an example, the Miami-Dade Venom Response Team responded to over 400 African bee stinging incidents in 2009. Continued sporadic pet, livestock, and known wildlife fatal stinging incidents are reported by the media.

The Apiary Inspection Section continues to lead the way with African bee educational

outreach initiatives. Hundreds of thousands of Florida citizens, state, county, and municipal authorities have been trained and educated about this dangerous pest.

The division has partnered with UF-IFAS on two levels for a comprehensive approach to African bee training. The first level involves training by Dr. Bill Kern of first responders, fire departments, emergency rescue personnel, and police in African honey bee (AHB) stinging incidents and the rescue of victims. The second level has been the creation at UF-IFAS by Dr. Jamie Ellis of the AFBEE or African Honey Bee Extension and Education Program. This is designed to provide all of Florida with timely safety and eradication recommendations for AHB.

The Apiary Inspection Section's African Bee Identification Laboratory continues to operate under a backlog of samples submitted by apiary inspectors, UF-IFAS, pest control operators, and concerned citizens. Best Management Practices for beekeepers continue to be offered to registered beekeepers as a way to maintain manageable honey bee colonies and prevent a negative public image.

The division, in coordination with other stakeholders in agriculture, including state, county, and local government agencies, UF-IFAS, first responders, schools, hospitals, and many others, continue to develop tools and training to protect the beekeeping industry and educate the public on how to effectively and safely deal with this potential danger. The transition to a feral bee population dominated by AHB in Florida is proceeding. All efforts are being made to avert and delay additional human fatalities by AHB in Florida.

Public Outreach

DPI has worked hard to inform the public about the importance of managed honey bees and about how to live safely with feral African honey bees. Approximately 1.4 million people have been exposed to these messages through DPI's web site, school presentations, bee organization presentations, media, both print and broadcast, fairs, and national meetings hosted in Florida.

Entomology, Nematology and Plant Pathology

Entomology

The Entomology Section completed 11,195 separate identifications this year involving 298,025 specimens. During that same period, 22 exotic species were found established within the state, 13 of which represented new U.S. or new hemisphere records.

Significant New Arthropod Records

Acari

Mesalox pitangae (Boczek and Davis, 1984) (=Aculus pitangae): Originally described from Eugenia uniflora L (Myrtaceae) in Piracicaba, Sao Paulo, Brazil. Boczek and Davis reported these mites were leaf vagrants, but Flechtmann and De Moraes (2003) reported leaf distortion and changes in the leaf texture. Dr. J.E. Peña discovered this mite on young fruits of E. uniflora in Homestead (Miami-Dade Co.) (E2010-1817) and by J.C. Lee in Palm Beach Co. (E2010-1930). In both cases, the mite was damaging the surface texture of the very

young fruits. The mite was also found on new growth, but it could not be determined if the observed damage was due to the pitanga mite or the presence of the broad mite (*Polyphagotarsonemus latus* (Banks).

Acerai guazumae (Cook, 1906): Originally described as Eriophyes guazumae by Cook in 1906 from specimens collected from a Guazuma sp. in Cuba. While Cook did not draw or photograph the mite, he did provide an image of the galls and leaf curling caused by this pest. Cook reported the mite was widespread in Cuba, and Dorsete reported this mite on Guazuma ulmifolia in Venezuela in 1968. This is the first report of the mite on Guazuma ulmifolia (bastard cedar, West Indian elm, chicharron) in Florida and was collected at a residence in Hialeah (Miami-Dade County) (E2009-5798). This mite lives in galls that are formed as a result of feeding. No other information is available on the biology of this species. No other gallforming eriophyids have been reported from Guazuma.

Coleoptera

Thalassa montezumae Mulsant, a ladybird beetle: Four specimens of this species were found feeding on croton scale in Homestead, Miami-Dade County, in August 2009. It was known previously from Mexico, Arizona, and Texas, but it has not been reported previously from the eastern United States. It is a beneficial insect except where it may be in direct competition with native ladybird beetles.

Trichrous pilipennis Chevrolat, a longhorn beetle: A single specimen of this blue and red species was collected in a trap in Fort Lauderdale in June 2009. It is a Caribbean

species known from Cuba and the Bahamas. Its biology is unknown, but it probably is not of economic significance.

Cryptolestes atratulus (Grouvelle), a laemophloeid beetle: This Asian species was collected in a trap in Kendall in April 2010. It is of no known economic importance, but its presence does illustrate the continuing influx of exotic Asian species into Florida. Since its discovery, several other specimens of this species have also been collected in South Florida.

Strongylium cultellatum Mäklin, a darkling beetle: This species was first collected in traps in Miami in May 2010. It is an Asian species, known to range from India to Japan and China. Since its discovery, it has been collected from several more localities in the southern part of Miami-Dade County. Like the species above, it is likely of little economic significance (members of the genus with known life histories breed in decaying wood), but it is indicative of a continuing problem safeguarding Florida from invasive exotics.

Chrysobothris scitula Gory, a buprestid beetle: This is a native metallic woodboring beetle recorded from Georgia and Alabama, but not previously from Florida. It was collected from the nest of the predatory wasp Cerceris fumipennis Say in Gainesville.

Diptera

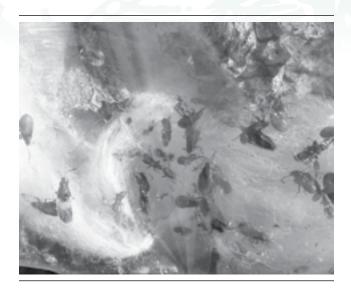
Drosophila suzukii (Matsumura), Spotted Wing Drosophila: This first find in Florida was found in rural Hillsborough County in August 2009. It is an Asian species first discovered in the United States in California a year earlier. It is now widespread in



California and Oregon where is has become a significant pest of cherries and raspberries. Since its discovery in Florida, it has been found throughout the southern third of the state as far north as Hernando and Indian River counties and south to Miami-Dade County. Crops potentially at risk in Florida include thin-skinned fruits such as strawberries, blackberries, and blueberries. To date, it has been detected infesting both strawberry and blueberry in Florida, but at very low, non-economic levels.

Hemiptera

Oxycarenus hyalinipennis (Costa), the cotton seed bug: This species was found for the first time in the continental United States in bolls of cotton plants at a residence on Stock Island, near Key West. It is a serious cotton pest. The cotton seed bug is originally from Africa, but it is established in Asia and more recently in the Caribbean, including Cuba. The bug has been intercepted many times by USDA inspectors at ports. All known infested plants in Florida have been destroyed. Future surveys will determine whether the cotton seed bug is established in Florida.



Vatiga illudens (Drake), cassava lace bug: This species is one of two cassava lace bug species in the genus Vatiga that are economic pests of the cassava crop in the Neotropics. Although leaf damage can be severe, the relationship between the bugs and root yields is unclear because of mixed infestations and other plant stress factors. Younger plants and plants under drought stress may be more susceptible to damage than older vigorous plants.

Siphoninus phillyreae (Halliday), ash whitefly: On June 1, 2010, DPI was informed by the botanical staff at Epcot in Lake Buena Vista that they suspected a population of ash whitefly was infesting a series of potted pomegranate plants maintained in an outside enclosure. DPI entomologists surveyed the area and verified that the whiteflies were indeed Siphoninus phillyreae. which was a first Florida occurrence of this very polyphagous pest species. The population appeared to be limited to the pomegranate plants, and in a brief survey of the surrounding area, DPI staff failed to find any suitable host plant species. Ash whitefly is known from California and North Carolina, where it became a severe pest of many

horticulturally and agriculturally important plant species. Only after the importation and release of the parasitoid wasp Encarsia inaron (Aphelinidae) did the infestations fall below detectable levels. The population at Lake Buena Vista also had the parasitoid wasp. The likelihood of eventually finding ash whitefly in Florida prompted DPI entomologists in 1990 to prepare a fact sheet (EENY-147) to educate inspectors about this species. This fact sheet will be superseded by a Pest Alert that will be released soon. Considering that the parasitoid wasp was apparently introduced with ash whitefly, and that it is such an effective biocontrol agent, DPI does not expect this whitefly species to have any significant impact on the Florida flora should Epcot staff fail to eradicate the population.

Paracoccus herreni Williams and Granara de Willink, a mealybug: On June 8, 2010, DPI inspector Jason Spiller collected a single adult female mealybug from a topiary hibiscus for sale at a retail store in Manatee County. The mealybug was identified as Paracoccus herreni, no common name, and subsequently verified by USDA Systematic Entomology Laboratory staff. This species has occasionally been intercepted at U.S. ports of entry, but had never been collected in the United States. Its previously documented range is Mexico, parts of Central America, and northern South America. Except for a few host records, which include Manihot esculenta, Acalypha sp. and Lantana camara, nothing is known about this mealybug. Repeated visits to the retailer failed to produce additional specimens. A trace-back was initiated to identify the importer and distributor, but inconsistencies in the paperwork have thus far stifled efforts to identify the plant's provenance.

Florida State Collection of Arthropods

Donations to the Florida State Collection of Arthropods totaled more than 63,878 specimens, valued at \$583,476. Eight tours involving 158 students and adults took place during the 2009-2010 fiscal year. The collection contains 9.5 million pinned specimens and 740,000 specimens stored in other media. The value of this collection is estimated at \$40 million.

Florida Biological Control Laboratory

The Florida Biological Control Laboratory continues to operate with a temporary autoclave for sterilization. Work continues on finding appropriate funds in these hard budgetary times to fix the problem. The USDA-ARS started a new project to find arthropod biological control agents to control Rhodomyrtus tomentosa. Currently two moths are being screened as possible biological control agents. Work continues on testing possible biological control agents previously brought in under permit into quarantine to control Chinese tallow tree, melalueca, tropical soda apple, cycad scale, Asian citrus psyllid, Metamasius bromeliad weevil, Jamaican nightshade, and Brazilian pepper.

Biological Control Research and Containment Laboratory

The most significant change to the Biological Control Research and Containment Laboratory (BCRCL) over the past year is its new sterilization building. Wastewater is now collected using above-ground tanks instead of below-ground tanks; the integrity of the old tanks became compromised and they were no longer acceptable for

quarantine use. The new effluent sterilization building is a 440-square-foot concrete block and brick veneer structure with preengineered wood trusses that consists of two above-ground stainless steel tanks that collect and sterilize all wastewater from the plumbing system of the containment area. Each tank is heated to 180 degrees F for 30 minutes and then allowed to cool down to 140 degrees F before being released to the city lift.

The BCRCL is currently working on many projects. To help farmers in the battle against tropical soda apple, colonies of tortoise beetles are being shared with them around the state. A thrip and a moth are showing promise as effective biological control candidates on Brazilian pepper. Researchers are looking for new biological control agents in the war against cycad scale. A large test plot of avocado and redbay trees is grown for their susceptibility to laurel wilt disease. Biological control studies are conducted on the yellowmargined leaf beetle, a severe cruciferous plant pest. For the control of Jamaican nightshade, two flower-bud weevils and a tortoise beetle are being studied.

The BCRCL has one approved-for-release biological control insect. A parasitic fly from Central and South America that hunts the weevil that is attacking Florida's native bromeliads is being released around the state at nature preserves and parks.

Over the past year there have been several biological control projects analyzed and brought to a close. For the cycad scale, many parasitic wasps and scale-destroying beetles have been studied. The work to find biological control agents from Central

and South America for Brazilian pepper is ongoing.

Fruit Fly Identification Laboratory (FFIL)

Approximately 250 Division of Plant Industry plant inspectors and USDA-APHIS-PPQ fruit fly survey specialists serviced approximately 55,000 total traps on both 14- and 21-day intervals as part of the Cooperative Fruit Fly Detection and Surveillance Program for the State of Florida. Field training for the recognition of fruit flies of economic importance was ongoing throughout the state for: new employees, current inspectors (who received an annual refresher), USDA strike team personnel as emergency program resources, and Caribbean Fly Free Certification personnel.

A total of 1,517,545 traps were serviced during fiscal year 2009-2010. Of the traps inspected, 252,114 fruit fly traps, which is 16.6 percent of all traps inspected, were submitted to the FFIL for further screening. Approximately 1,604,100 sterile Mediterranean and wild Caribbean fruit flies were processed during this time. There were 60



dissections performed to confirm sterility of Mediterranean fruit flies from the preventive release areas, and there were 297 instances where urgent suspect target economic fruit flies were sent to the FFIL for identification.

Table 1. Fruit Fly Identification Laboratory							
FFIL 2009 - 2010 Number of Traps Only	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total		
Gen FF Detection	8,905	7,603	4,764	28,138	49,410		
SIT/PRP	48,019	51,307	61,350	34,243	194,919		
CFFCP	9	165	83	5	262		
Specimen Reports	72	215	179	128	594		
Quality Control	167	147	157	165	636		
Dissections	17	4	2	37	60		
Emergency Program	0	0	0	5,936	5,936		
Urgent Suspect Flies	5	170	98	24	297		
	57,194	59,611	66,633	68,676	252,114		

In August 2009, a new potential pest species, *Drosophila suzukii*, was first detected in Hillsborough County. A survey was conducted in Hillsborough County, and subsequent monitoring of this new introduction was carried out at fixed trap sites and in commercial strawberry and blueberry areas during the respective seasons. Hosts for the new pest were also confirmed and a research colony was established and cultures shared with the University of Florida extension laboratories for basic research and testing.

In June 2010, a number of larvae of the Mediterranean fruit fly were found in Palm Beach County triggering an emergency delimitation and eradication program. Due to the combined early detection and prevention efforts, no economically significant fruit flies became established in Florida during fiscal year 2009-2010.

Advanced Diagnostic Laboratory

The Advanced Diagnostics Laboratory (ADL) processed a total of 2,886 samples during 2009-2010, including 117 regulatory samples. Various molecular, biochemical, and other analytical techniques were used. Regulatory sample processing included:

Detection and identification:

- Identification of plant pathogenic bacteria including those responsible for citrus greening (HLB) and zebra chip in potato, and phytoplasmas implicated in Texas Phoenix palm decline (TPPD) in Sabal palmetto and Phoenix palm.
- Identification of plant viruses including crini-, gemini-, and other virus species.

nomic diagnosis of *Phytophthora ramorum*, the pathogen responsible for sudden oak death (SOD), as well as other *Phytophthora* species, *Raffaelea lauricola* (laurel wilt pathogen) and related fungi, and the citrus black spot pathogen, *Guignardia citricarpa*.

- Molecular taxonomic confirmation of the spotted wing *Drosophila*, *D. suzukii*, and Medfly Pathway Analysis to determine the origin of the Mediterranean fruit fly, *Ceratitis* capitata.
- Testing for soil formulation compliance as mandated by the Imported Fire Ant Certification Program.

CHRP (Citrus Health Response Plan) related activities:

 Continued molecular analysis for various citrus pests and pathogens of Florida citrus, including citrus black spot and citrus greening (HLB).

New and noteworthy records include:

- Sequence analysis of fungi cultured from avocado in South Florida determined that the diagnosis by the University of Florida of the laurel wilt pathogen, *Raffaelea lauricola*, in the commercial avocado groves was a false positive. The pathogen responsible for the symptoms was found to be an as yet undescribed species of *Raffaelea*.
- Confirmed citrus black spot (Guignardia citricarpa) in Florida from samples extracted and cultured by the Plant Pathology Section. This is the first confirmed finding of this serious citrus pathogen in North America.

- Carried out Medfly pathway analysis of Ceratitis capitata from the recently discovered infestation in Florida. The mitotype of these flies was determined to be M07, previously recorded by USDA-APHIS, from Central America, Spain, Australia (Perth), Baja California, and SIT in Hawaii.
- Confirmed the identity of the spotted wing Drosophila, D. suzukii, adults and larvae.
 This is the first record from Florida of this significant pest.

New molecular diagnostics developed and/ or implemented include those for:

- Laurel wilt pathogen, Raffaelea lauricola
- Medfly (Ceratitis capitata) pathway analysis
- Detection of Crinivirus in plants
- Spotted wing Drosophila, D. suzukii

Other activities of the ADL included providing technical assistance to the Universidad del Valle de Guatemala, Guatemala, to help implement molecular diagnostics for citrus greening (HLB) and potato zebra chip in that country.

Botany

For fiscal year 2009-2010, the Botany Section processed 9,037 samples. In addition, 326 specimens were added to the herbarium (PIHG), bringing the total size of the collection to 10,741. The number of vials in the seed collection increased by two samples to 1,471.

In August 2009, Dr. Patti Anderson traveled to southern California as part of a

project funded by the USDA to produce a computer-based identification tool. When completed, the project will provide interactive keys to the identification of 80 palm species cultivated in the United States and the Caribbean islands, and to their pests. Dr. Anderson, along with Dr. Cal Welbourn and Dr. Greg Hodges, is working in collaboration with scientists from the University of Florida and Florida A&M University on this project. In California, Dr. Anderson photographed palms and collected palm samples, adding 10 species to DPI's collection. The trip included visits to the Huntington Botanical Garden, San Diego Botanical Garden (formerly Quail Botanical Gardens), the Arboretum of Los Angeles County and Fullerton Arboretum, as well as several nurseries in southern California. She also attended a USDA workshop in Gainesville to



coordinate the development of the key with entomologists on this project.

At the urging of Dr. Edward Barnard of the Division of Forestry, both Dr. Weaver and Dr. Anderson participated in a revision of the handbook "Forest Trees of Florida." Dr. Weaver made extensive revisions to the text. Dr. Anderson prepared an identification key and supervised the preparation and addition of several illustrations. With the technical assistance of David Treadway of the Division of Forestry, the handbook is now more accurate, up to date, and easy to use.

Both Dr. Weaver and Dr. Anderson participated in the inspector-training program in the spring of 2010, covering plant identification and other aspects of basic botany, and Dr. Weaver presented on invasive weeds to the inspectors of the Anastasia Mosquito Control District in St. Augustine.

In the fall of 2009, *Mikania micrantha*, or mile-a-minute, a state and federally listed noxious weed was detected in the Redlands area of Miami-Dade County. This was the first recorded occurrence of the pest in the United States. Dr. Weaver, in cooperation with USDA scientists and authorities on the Compositae, helped to make a positive identification of the plant, distinguishing it from Florida's native species of *Mikania*. He prepared several fact sheets and a pest alert on the *M. micrantha*, and participated in regular telecom and face-to-face meetings at which its detection and eradication were discussed.

Citrus Germplasm Introduction Program (CGIP)

The Florida Citrus Germplasm Introduction Program (CGIP) located in Gainesville, processes new varieties of foreign and domestic citrus budwood permitted for entry by the USDA and FDACS. CGIP provides therapy and pathogen-testing. also develops disease-free germplasm for the Florida certified budwood Foundation Collection and ultimate release to nurserymen, breeders, and growers. The process requires a minimum of 18 months to complete, and the variety must be approved by the Citrus Budwood Technical Advisory Committee, the Director of the Division of Plant Industry, and, if foreign, by the USDA-PPQ, prior to its release from quarantine.

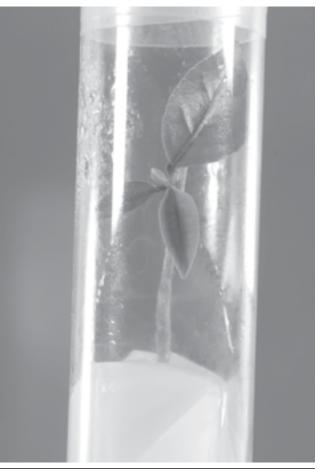
Introducing Six New Varieties

CGIP acquired six new citrus varieties originating from California, Spain, and Japan, including: 'Wheeny' and 'Sukega,' two monoembryonic, non-bitter grapefruit types for breeding of canker-resistant grapefruit-like fruit; two seedless mandarin varieties, 'Pixie' (late season) and 'Setoka,' a licensed easy-peeler; and two varieties for research and breeding, *Citrus latipes* with reported HLB resistance and Haploid Clementine derived from 'Nules' for genomic sequencing and research.

New Germplasm and Budstick-Sprouting

Upon arrival, high-quality budwood is now prepared for budstick sprouting to generate shoots and meristems for use in shoot-tip grafting (STG). Budstick sprouting reduces the length of time required to process a new variety by approximately 12 months, and

eliminates the need to grow diseased germplasm in the greenhouse. Rather, shoots are sprouted in a test tube (*in-vitro*) at 32 degrees Celsius and then harvested. Merigood optics to clearly view shoots while excising their meristems and micro-grafting these onto *in-vitro* grown rootstocks. The Botany Section upgraded to a Leica Z16 APO A zoom macroscope with video monitor.



Released 26 New Varieties

New varieties included: 18 lemon selections developed for oil production by the University of Florida (UF), five Mandarin varieties (DPI 153 unnamed C5282, DPI 154-Mandalate, and DPI 160-Ota from the Instituo Sperimentale perl'Agrumicoltura breeding program in Acireale, Sicily, and DPI 164-Moria and DPI 165-Winola from the Citrus Depository of Israel), two tetraploid breeding parents (DPI 150-4N Hudson grapefruit from the Citrus Variety Collection in California, and 4N-Murcott from the Department of Primary Industries and Fisheries in Queensland, Australia), and one unnamed Valencia orange, 02VAL01-XN15, selected for improved fruit characteristics from the UF program.

Plant Network Penroportatives for CGIP and other of

stems are excised and grafted onto *in-vitro* grown rootstocks and often sprout in three months or less. A total of 211 STGs were performed with 77 successful grafts representing 32 citrus selections/varieties.

STG Equipment Upgrades

STG is the therapy method used to eliminate heat-tolerant, graft-transmissible citrus pathogens including citrus viroids and *Candidatus liberibacter asiaticus*, the causal agent of HLB or Asian citrus greening. The STG technique requires a microscope with

Representatives for CGIP and other clean plant centers from across the United States (Alabama, Arizona, California, Florida, Louisiana, and Texas) attended several meetings and collaborated with stakeholders to form the governing body of the Citrus Clean Plant Network (CCPN). The CCPN is organized under the banner of the National Clean Plant Network (NCPN) funded by the Farm Bill of 2008, as a program where partnerships of regional clean plant centers of excellence are recognized for diagnostic and pathogen elimination services, and provide clean propagative plant germplasm

Member of the National Citrus Clean

or maintain a pathogen-tested collection with plant material available to certified clean plant programs, nurseries, breeding programs, and growers. In July 2009, the CGIP hosted a visit from the NCPN program coordinator and members of the CCPN.

Nematology

During fiscal year 2009-2010, the Nematology Section analyzed 14,715 samples. These samples contained more than 93,300 specimens of plant parasitic nematodes, which were identified to genus and/or species by the division nematologists. This diagnostic work involved 21,182 morphological and molecular identifications. Nematological analyses for certification and regulatory programs relative to citrus,

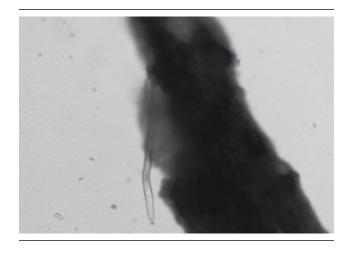


ornamentals, and other Florida crops represented 93.3 percent of the total diagnostic work. The remaining 6.7 percent included analyses for survey of nematodes of regulatory significance, plant problems, and investigations.

The surveys conducted in the previous fiscal year on nematode parasites of bromeliads were continued in 2009-2010. The lesion nematode *Pratylenchus hippeastri* was detected for the first time in South Florida on bromeliads, which are new hosts

for this nematode reported previously only on amaryllis. The populations of this nematode from bromeliads contained males, which were not reported in the original description of this species. The function of the males in the bromeliad populations is unclear since they were present in a very small number and were consistently in association with un-mated females showing an empty and small spermatheca. The identity of these males was confirmed by sequencing rDNA genes from male specimens. In spite of the occurrence of a few males, these observations did not provide any evidence that P. hippeastri is an amphimictic species.

Morphological and molecular analyses were also extended to other root lesion nematodes from different geographical areas including Florida, Russia, and South Africa. The results of these analyses provided evidence that the *Pratylenchus* populations studied were new species closely related phylogenetically and representing a *P. hippeastri* species complex. Two of these root-lesion nematodes from Florida pastures were described as new species and called *Pratylenchus floridensis* n.sp. and *P. parafloridensis* n.sp. These longterm studies, which are still in progress,



were conducted in cooperation with the Italian National Research Council, Bari, Italy; University of Florida, Citrus Research and Education Center (CREC), Lake Alfred; the California Department of Food and Agriculture, Sacramento, California; and the Institute of Agriculture and Fisheries Research, Merelbeke, Belgium.

Since 2007, Department nematologists have been conducting a survey of potato cyst nematodes (PCN) in potato-growing areas in Florida. Colleagues from USDA-APHIS and FDACS-DPI Florida Cooperative Pest Survey (FL CAPS) participate in this survey. A total of 647 samples were collected in 2007-2009. An additional 64 samples were collected in 2010 and the survey will continue in the coming fiscal year. So far, the results of the nematological analysis of these additional samples have not provided any evidence of occurrence of the regulated pale and golden nematodes (PCN) in the potato-production areas in Florida. These findings have important regulatory significance and provide support to the exemption status of Florida agricultural industries from any ban on the export of potato tubers and other crops to countries regulating the PCN. The nematode plant pests found in this survey did not differ from those found in the potato fields sampled in 2007 and 2008 and consisted of awl, ring, sting, and stunt nematodes. The cyst-forming nematodes were represented mainly by the yellow nut grass cyst nematode, Heterodera cyperi, which is not a serious pest of cultivated crops.

Department nematologists and botanists co-authored with the entomologists of the Entomology Department at the University of Catania in Catania, Italy, a paper on new



palm hosts of the red palm weevil, *Rhyn-chophorus ferrugineus*. This weevil is seriously damaging landscape palms in Italy and Mediterranean countries. The potential threat this insect pest poses to the palm industry of Florida was emphasized. The article was submitted for publication in the journal "Palms."

In April 2007, laurel oak, Quercus laurifolia, plants were found infected with root-knot nematodes in a home garden in Alachua County. Infected roots were severely galled and partially rotted. Morphology of perineal patterns of females as well as body, stylet, and tail length of J2 and males matched those of the original description of *Meloidogyne partityla*, which parasitizes mainly pecan. Studies on this nematode were continued during fiscal year 2009-2010 to determine the ability of the oak population of this nematode to infect and reproduce on other species of oaks as well as pecan. Preliminary results of these host tests indicated that other species of oak in the process of identification are susceptible to this root-knot nematode. These host range studies will be continued in fiscal year 2010-2011.

Studies were conducted as an attempt to select molecular markers for identification of root-knot nematodes (RKN). The identification of selected *Meloidogyne* spp. found in Florida using ITS-RFLP was performed using three nominal species of RKN (Meloidogyne arenaria, M. floridensis, M. mayaquensis) and four unidentified populations (Meloidogyne sp. 2-5). The rDNA-ITS region from the RKNs were amplified using the ITS-specific primers 18S and 26S. Each isolate of RKN yielded one major product of approximately 700 bp. The amplified ITS regions were digested with nine restriction enzymes. The restriction patterns produced by enzymes Alul, Dra I, Hind III, Rsal, and Tru 9I did not distinguish any of the RKN species. The patterns of EcoRI digestion of M. arenaria, which consisted of two fragments of approximately 600 and 200 bp, were distinct from those of the other RNKs. The enzyme Hinfl produced two fragments. One set of fragments had bands with approx. 400 and 300 bp, whereas the other set had bands of 500 and 200# bp. These patterns separated M. arenaria, M. floridensis, Meloidogyne sp.3 and Meloidogyne sp.5 from M. mayaguensis, Meloidogyne sp.2 and Meloidogyne sp.4. The enzyme Msp I did not separate M. arenaria, M. floridensis, Meloidogyne sp.3 and Meloidogyne sp.5 from each other. The enzymes Rsal and Sspl did not restrict any of the amplified products. These studies, which were conducted in collaboration with the Department of Entomology and Nematology, University of Florida, will be continued in fiscal year 2010-2011.

Department nematologists co-authored with scientists from the University of Florida a review article on weed species as hosts of root-knot nematodes. Many weed plants found in Florida are known to be susceptible to these nematodes and they play a very important role in the implementation of management of these pathogens not only in the fields but also in ornamental nurseries. This review article was published in "Nematropica" in December 2009.

Department nematologists collaborated with scientists from the Department of Entomology and Nematology and the Department of Microbiology and Cell Science at the University of Florida in a study to determine the morphology, ultrastructure and phylogenetic position of a Pasteuria isolate infecting Mesocriconema ornatum. A population of Pasteuria was observed infecting Mesocriconema ornatum in a peanut field in Marion County. In natural field populations, attachment and development of this ring nematode Pasteuria (RNP) were frequently observed in female ring nematodes. Each parasitized female contained about 5,000-8,000 mature endospores that were each enclosed in a large exosporium and devoid of a sporangium. The cup-shaped endospores measured 3.79 + 0.12 µm in diam. and 2.21 + 0.12 µm in height, whereas the central body diam. was 2.41 + 0.13 µm and the height was 1.81 + 0.12 µm. TEM micrographs revealed that sporulation conformed to the seven-staged development previously observed in other species of Pasteuria. The sporangium was rhomboidal in shape and appeared to disintegrate at the culmination of endospore maturation. RNP was different from other Pasteuria by not having microprojections on the outer spore coat or a basal ring surrounding the germination pore. RNP endospores possessed the apomorphy of a thick and trapezoidal epicortex that was about two-thirds the height of the core. The basal adhesion layer was

also thick, measuring about 0.14 µm. Phylogeny based on Bayesian inference and maximum likelihood methods of a 1,344 bp region of the 16S rRNA placed RNP within the genus *Pasteuria* together with other isolates that infect tylenchid nematodes. The morphological and genetic uniqueness of RNP justify its consideration as a new candidate species. A manuscript is in preparation to be submitted to the Journal of Nematology.

Janete Brito was invited to organize a symposium on *Meloidogyne mayaguensis* for the Second International Congress of Tropical Nematology. The conference was held October 4-9, 2009, in Maceio, Alagoas, Brazil. She also was one of the guest speakers at this symposium.

Janete Brito was selected by the Society of Nematologists to receive the Syngenta Award for the discovery of *Meloidogyne mayaguensis* in the continental United States and research carried out to better understand its geographical distribution in Florida, host, virulence, and significance to regulatory programs. Brito received this award at the 49th annual meeting of the Society of Nematologists held July 11-14, 2010, in Boise, Idaho.

During the spring semester of 2010, Division of Plant Industry nematologists presented nematology seminars for graduate students at the Department of Entomology and Nematology at the University of Florida in Gainesville.

Plant Pathology

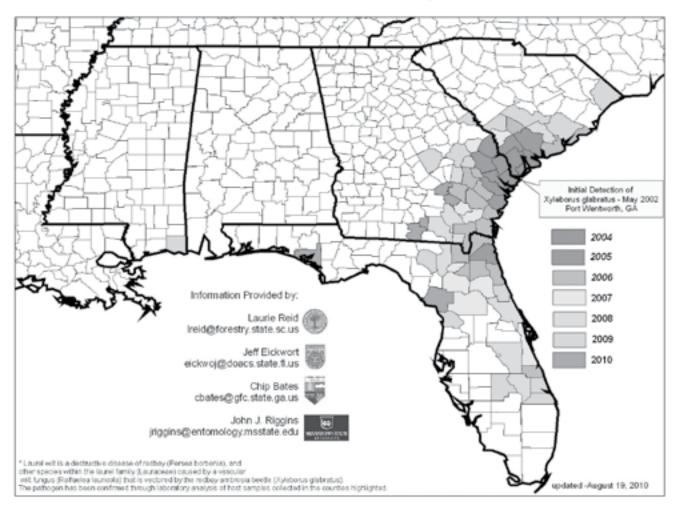
The overall number of samples processed in the Plant Pathology Section was up slightly over the previous year: 11,692 compared to 11,142 in 2008-2009. This represents an increase of about 5 percent in sample load. Citrus canker samples made up 2,238 of that number, while citrus greening samples totaled 6,605. Routine samples submitted for a complete plant health assessment accounted for 2,849 samples, up slightly less than 2 percent over last year.

Laurel Wilt Threat to Florida Avocados

Since the laurel wilt vector, redbay ambrosia beetle, *Xyleborus glabratus*, was discovered near Savannah, Georgia, in May 2002, and the disease laurel wilt was observed in the United States for the first time about a year later in Hilton Head, South Carolina, the pair have been making steady progress north,



Distribution of Counties with Laurel Wilt Disease* by Year of Initial Detection



west, and south from the presumed point of introduction (see map, courtesy of USFS). Kingsley Plantation in Duval County was the site of the first incursion into Florida in April 2005. At present, despite fairly steady early progress down the east coast of Florida, the beetle and disease have stalled out for over a year at the latitude corresponding to the north edge of Lake Okeechobee. Twenty-three Florida counties now have the pathogen and vector, and avocado trees out of their natural range have fallen victim to laurel wilt at several sites along the east coast. The commercial avocado industry in Miami-Dade County is especially wary of the vector and disease encroaching into the area. A lone redbay ambrosia beetle

with the pathogen was trapped in west-central Miami-Dade County in early March about five miles north of the major avocado production area in the county, but intensive follow-up trapping and survey in the area revealed no more insects, and no victims of laurel wilt. Surveys and trapping by Florida Cooperative Agricultural Pest Survey (CAPS) personnel continue.

Diagnostics for *Raffaelea lauricola*, the pathogen of laurel wilt disease, continue to improve. Some careful gene sequencing of isolates of fungi derived from insect-infested Lauraceae indicate that there are perhaps several closely related ambrosia fungi that could easily be confused with the genuine

pathogen. Cooperative work with pathologists at UF in Gainesville and Homestead will eventually provide extremely accurate molecular tools for identification that are relatively quick to use.

Meetings of the scientists working on the laurel wilt problem took place in September and November. The second meeting was attended by several specialists in ambrosia beetle-vectored tree wilt diseases in the United States, and proved very informative as the investigations into this heretofore unknown disease unfold.

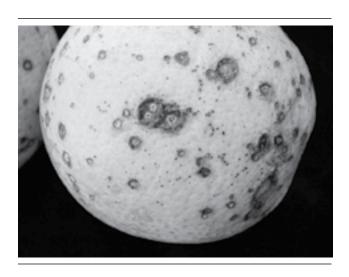
Gladiolus Rust

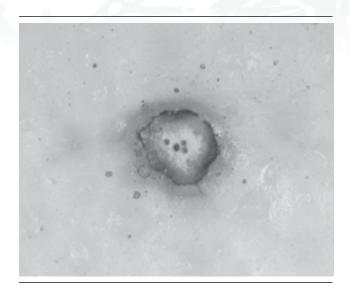
After a two-year hiatus in Manatee County, gladiolus rust (caused by Uromyces transversalis) appeared again in commercial cut-flower crops at Manatee Floral. The discovery in late April, so late in the season, was unanticipated. Although it was feared that the disease would also likely reappear in remote Hendry County, the only other commercial glad farm left in the state, this never happened. In fact, this marks the second consecutive year that the Hendry County production area has remained rust free. Inspections in the field at Manatee Floral, roguing of infected plants and nearby plants in the field, stripping off foliage, and careful inspection and precautionary fungicide dipping in the packinghouse considered adequate measures to keep the finished product flowing safely out of the infested area. Once more intensive fungicide treatments were adopted in the field to close out the season, the incidence of rust was more easily managed. No rust was uncovered in residential surveys in the area. The source of the inoculum that initiated this 2010 episode remains a mystery. Some

funding has been obtained by a coalition of scientists in the Southeast to look at fungicide efficacy and spore survival. Part of the work will be conducted in the DPI Plant Disease Quarantine Facility.

Discovery of Citrus Black Spot Disease near Immokalee

In early March, symptoms of the exotic citrus disease known as black spot were detected in some 23-year-old Valencia just south of Immokalee. Symptoms of the fungal disease caused by Guignardia citricarpa (anamorph *Phyllosticta citricarpa*) were first detected during a Citrus Health Response Plan Multipest Survey (CHRP-MPS) on March 8, 2010. This marks the first report of this fungal pathogen in North America and constitutes a major jump in the known geographical range of the pathogen. Initial conventional and molecular laboratory analyses by DPI plant pathologists confirmed the citrus black spot finding, and subsequent testing by the USDA at their Beltsville, Maryland, laboratory provided the final confirmation. Federal and state agriculture officials have joined forces to address the challenges this new citrus disease presents to Florida and potentially U.S. citriculture.





Following the March 8 discovery of citrus black spot (CBS) disease, delimiting surveys and a forensic investigation began. Surveys have identified a limited area of commercial citrus with visible symptoms (see map), and surveyors are eager to observe the known-infested areas through the growing season to learn how this disease manifests as the next crop matures. CBS disease is unusual, in that the spots only appear as the crop ripens. Therefore, delimiting survey efforts are only meaningful at particular times in the growing season depending on the variety. It is important to note however that after the discovery, inspections for fruit symptoms at trailer dump stations at processing plants coupled with trace back of fruit provenance did not identify any additional areas with the disease, though they did confirm known-infested sites reliably. Dr. Gordon Bonn and Tim Schubert, along with USDA scientists, provided CBS symptom recognition training at processing plants to augment the survey coverage of the field inspections. Also, no CHRP-MPS efforts elsewhere in the state turned up any more CBS during the entire 2009-2010 season, including special visits to sites where production managers suspected they may have encountered suspicious symptoms. Confidence is high that the CBS-infested area identified this spring represents the extent of the disease in commercial Florida citrus at this time. Fresh fruit shipment regulations from Florida that reflect the new disease establishment are being developed.

The forensic team made up of representatives of USDA-APHIS-PPQ and FDACS-DPI visited all growers and production managers in the known-infested area on April 14-17, 2010, to glean any information that might reveal the source and the time of arrival of the inoculum that established CBS in Florida. At the time of this report, the origin of the infection has not been learned. Since no CBS symptoms were encountered in residential surveys conducted by USDA surveyors in nearby communities of Immokalee, Ave Maria, and Golden Gate Estates, that possible avenue of introduction remains unclear also. The possibility that undocumented distribution of Citrus hystrix foliage that is imported for culinary uses might be a pathway is being explored. Citrus foliage can be infected with the pathogen and show no symptoms whatsoever. When discarded outdoors and allowed to decay, air-borne inoculum escapes from the foliage and can infect citrus leaves and fruit. Since the disease is slow to appear, tracebacks are challenging. A video presentation on the biology of CBS was recorded and posted on the FDACS-DPI web site, as was a Pest Alert on the same topic.

Citrus Canker Developments

Citrus canker disease caused by the bacterial pathogen *Xanthomonas citri* pv. *citri* (note the name change from *X. axonopodis*

pv. citri) continues to spread throughout the citrus population of Florida. The eradication effort against this disease was discontinued in January 2006 after considerable delays posed by litigation were followed by extensive tropical storm and hurricane inoculum dispersal. Over the past year, the disease was detected for the first time in 279 new sections based on Pest Incident Control System (PICS) reports. It is noteworthy that these finds were not the result of systematic statewide surveying for the disease, but are based on detections that are made during CHRP-MPS surveys in commercial citrus and sentinel surveys in residential citrus. One hundred ninety-four new sections were recorded with canker for the first time in the previous year using similar survey methods.

Class action litigation to declare a class on homeowner compensation for citrus canker tree removals during the eradication effort was heard in Orange County on December 21-23, 2009, and Miami-Dade County on June 15-17, 2010. In both cases, the class was declared. Testimony on the biology and epidemiology of the disease was presented by Dr. Tim Schubert in both venues.

The USDA published a new rule October 22, 2009, allowing citrus fruit movement into all citrus-producing states based on the research performed by ARS, UF, and DPI in Florida. Continuing research has verified that citrus canker bacteria do not move from infected mature fruit to healthy citrus plants in the field. This work is being supported by USDA-Technical Assistance for Specialty Crops (TASC) funds.

Annual Meeting of the American Phytopathological Society

The annual meeting of the professional society of plant pathologists was held in Portland, Oregon, in August 2009. Dr. Tim Schubert was in attendance and was elected vice chairman of the Regulatory Plant Pathology Committee and will serve as chair in 2010. In addition to many substantive discussions with colleagues on topics of mutual interest, Dr. Schubert delivered regulatory program updates on diseases of major importance to Florida and U.S. agriculture, including citrus greening, citrus canker, laurel wilt, and gladiolus rust.

California Oak Mortality Task Force

Dr. Tim Schubert was funded by the National Plant Board to attend the most recent meeting of the California Oak Mortality Task Force (COMTF) June 8-11, 2010. Since the discovery of the sudden oak death/Ramorum blight disease in California caused by Phytophthora ramorum, COMTF has been instrumental in coordinating communications and research on the disease. In addition to hearing formal presentations by research scientists from the United States, Canada, and Europe working on this disease, a tour of a federally funded experimental nursery site to study pathogen behavior and amelioration was provided. A field trip to nearby China Camp State Park north of San Francisco demonstrated the dramatic impact this disease has had on coastal California live oak ecosystems.

ANNUAL REPORT 2009 / 2010

SUPPORTING FLORIDA AGRICULTURE

Other Highlights

Presentations and Lectures

- Guest lecturer in the UF Plant Pathology Department class 3002/5005 on Citrus Canker and Citrus Greening in Florida, October 22, 2009
- Guest lecturer in the UF Agronomy Department class PCB 2441-Biological Invaders on Citrus Canker, December 2, 2009
- Presentation at the Annual Conference of the American Society of Mechanical Engineers, Citrus Division, on the Biology of Citrus Canker and Citrus Greening, March 25, 2010
- Polycom presentation at UF on Permitting Plant Pests with Phillip Lake, April 8, 2010
- Training Class 82 presentations on Web-Ex by Plant Pathology staff for new plant health inspectors on March 23 followed by field training in Brooksville, April 15, 2010
- Training sessions with key personnel at citrus processing plants on the recognition of citrus black spot symptoms, May 18-20 and May 25, 2010

Visitors to Plant Pathology Section

- Visiting plant pathology regulator from Taiwan, August 17, 2009
- Intern studying regulatory plant health science from Wageningen, Netherlands, September 28, 2009

- A delegation of six Chinese plant protection and plant regulatory scientists, March 9, 2010
- Class of UF Forest Pathology students for clinic orientation, April 1, 2010
- Interview with Scientific American reporter on biocontrol of plant pests, November 10, 2009
- Consultation with John Beuttenmuller,
 Germplasm Manager at IFAS, Florida Foundation, Seed Producers, Inc. on the clean plant network concept, November 24, 2009
- Dyrana Russell, a doctor of plant medicine candidate at UF, internship in disease diagnosis from August through December, 2009

Diseases New to Florida

These pathogens were already present here, but have been detected on a new host plant:

- Huanglongbing caused by the fastidious phloem-limited bacterium *Candidatus* Liberibacter asiaticus reported for the first time on the citrus relative *Atalantia ceylandica* (PPST 36649).
- Anthracnose caused by the fungus *Colletotrichum* coccodes reported on *Capsicum frutescens* (PPST 29102).
- Algal leaf spot caused by Cephaleuros virescens reported on Feroniella oblata (PPST 32414).
- Cercospora mikaniacola fungal leaf spot found on the new invasive weed Mikania micrantha (PPST 33064; pathogen has been

reported on other species of *Mikania* in Florida).

- Pyricularia grisea fungal leaf spot on and ornamental *Pennisetum* grass (PPST 28595).
- Raffaelea lauricola fungal vascular wilt on avocado, Persea americana (PPST 28015; pathogen is widespread on redbay, Persea borbonia, and other lauraceous hosts in North and Central Florida, but this was the first time DPI had diagnosed the pathogen on avocado. Jason Smith at UF had previous avocado records.).
- Geosmithia sp. ambrosia fungus associated with avocados displaying vascular streaking and ambrosia beetle invasion (PPST 27832).
- Cylindrocladium parasiticum fungal root and crown rot of Quercus myrtifolia (PPST 29252).
- Phytophthora cactorum blight of Rhaphiolepis indica (PPST 35823).
- Hainesia lythrii fungus associated with a flower blight and unfruitfulness on hybrid blackberry, *Rubus* sp. "Ouachita" (PPST 37098).
- Oidium sp. fungal powdery mildew on the invasive tallow tree, *Sapium sebiferum* (PPST 32778).
- Drechslera tritici-repentis fungus causing yellow leaf spot on wheat, *Triticum aesti-vum*. This disease is common on wheat elsewhere around the world. (PPST 35871).

Pathogen Discoveries

These pathogens were discovered for the first time in Florida or the United States:

- Septoria mikania-micranthae fungal leaf spot discovered on the newly discovered invasive weed Mikania micranthae (PPST 33451). Both host and pathogen are reported in the United States for the first time; the pathogen is being considered as a possible biocontrol agent.
- Asperisporium moringae fungal leaf spot on Moringa oleifera, new to the United States (PPST 27522).
- Passionfruit woodiness potyvirus on *Passiflora choconiana*, new to the United States (PPST 29895).
- Passionfruit mottle potyvirus on *Passiflora x belotii*, new to the United States (PPST 29896). Both this virus and the previous virus were discovered on the same premises at the same time on asexually propagated stock. These viruses are both spread by aphids and by mechanical means.
- Peronospora phlogina fungal downy mildew of Phlox subulata, first report from Florida (PPST 35479).
- Corniculariella sp. fungus associated with dieback and bark discoloration of peach, Prunus persica (PPST 34211).

Cooperative Agricultural Pest Survey

The Florida Cooperative Agricultural Pest Survey (CAPS) program – comprised of a State Survey Coordinator, three Pest Sur-

vey Specialists, a GIS Specialist, a Public Information Specialist, a Molecular Diagnostician, and a Laboratory Technician, as well as USDA Pest Survey Specialists and the Entomology Domestic Identifier – is the largest CAPS program in the nation. The CAPS team was involved in many key surveys and initiatives throughout the state during fiscal year 2009-2010.

Florida's agricultural community and citizens were made more aware of exotic pests by means of the CAPS web pages, a traveling tabletop exhibit display, an information booth at the Florida State Fair, public outreach door hangers, a web-based laurel wilt video public service announcement, flyers, online survey reports, computer desktop calendars, pest identification training sessions, scientific conferences, public meetings and presentations, and newspaper articles, to name a few.

Potato Cyst Nematode Survey

The U.S. Department of Agriculture (USDA) and the Idaho State Department of Agriculture announced on April 19, 2006, that the pale potato cyst nematode, *Globodera pallida* Stone, had been detected from a soil sample collected at an ISDA potato grading facility. This sample was collected in an ongoing CAPS survey to detect exotic pest nematodes. This was the first detection of this very important nematode pest of potato in the United States.

Globodera pallida and the closely related golden nematode *G. rostochiensis* (Woll.) form a pest complex in which each species is commonly referred to as a potato cyst nematode (PCN). These potato cyst nematodes are of worldwide regulatory concern.

They are obligate parasites of a number of solanaceous plants including potato, tomato, and eggplant (with potato being the most important); can cause potato yield losses of 20 percent to 70 percent; are easily transferred by passive means, especially in soil adhering to potato tubers; and female PCN can produce hundreds of eggs which after the females' deaths are retained in their hardened bodies, or cysts, that can persist in soils for 20-30 years in absence of a suitable solanaceous host. Their presence can spur quarantine action and result in loss of markets.

A CAPS potato cyst nematode (PCN) survey initiative began in Florida in April 2007. According to the national protocol, 10 percent of commercial potato fields in each county are to be randomly sampled. At this time, the CAPS team has surveyed and sampled 18,953 acres in 11 Florida counties (Charlotte, 100 acres; Collier, 1,947 acres; Flagler, 665 acres; Lee, 1,416 acres; Manatee, 1,850 acres; Miami-Dade, 60 acres; Osceola, 1,300 acres; Okeechobee, 1,200 acres; Putnam, 1,777 acres; St. Johns, 6,838 acres; Suwannee, 1,800 acres). This represents over 60 percent of the state's commercial potato production acreage. A total of 1,324 soil samples were submitted from the survey to FDACS-DPI nematologists for processing and identification. No PCN has been found in any samples processed at the time of this report. In addition to a thorough screening for PCN, all plant-parasitic nematodes found in each sample were identified. From the 1,324 soil samples currently processed, over 197,444 plant-parasitic nematodes in two orders, eight families, and 15 genera have been recorded. No nematodes of regulatory concern have been found. A report of the results of the

nematologists' findings for each site/field was provided to the producer.

Laurel Wilt/Redbay Ambrosia Beetle Survey

The redbay ambrosia beetle (RAB), *Xy-leborus glabratus* Eichoff, and its symbiotic fungus, *Raffaelea lauricola* Harrington and Fraedrich, were first detected in Florida in 2005. Since then, the CAPS team has worked with the Division of Forestry to survey for and track the spread of this beetle/pathogen complex throughout the state.

Laurel wilt has an expanding host range that includes avocado, *Persea americana* var *americana* Mill.; red bay, *Persea borbonia* (L.) Spreng; swamp bay, *Persea palustris* (Raf.) Sarg.; silk bay *Persea humilis* Nash; sassafras, *Sassafras albidum* (Nutt.) Nees; pondspice, *Litsea aestivalis* (L.) Fernald; pondberry, *Lindera melissifolia* (Walter) Blume; and camphor tree, *Cinnamommum camphora* (L.) J. Presl. This fungus grows throughout the sapwood of a tree, preventing the flow of water and nutrients within the plant, ultimately killing the tree a few weeks after inoculation.

While the loss of redbay from the Florida landscape would be of ecological significance, the loss of avocado would be of considerable economic and agricultural significance. The Florida avocado industry consists of about 7,000 fruit-bearing acres (personal communication, Alan Flinn, Avocado Administrative Committee, May 2009), more than 99 percent of which are located in southern Miami-Dade County. Avocados are a \$13 million industry in Florida. The infestation by the beetle and infection by its symbiotic fungus could result in a perma-

nent reduction in the long-term profitability of the local avocado industry.

For this reason, the CAPS survey efforts were increased in scope and intensity as the disease moved ever closer to the major avocado production area in fiscal year 2009-2010. Several major surveys took place as well as a continued trapping initiative and a new sentinel site survey program.



The CAPS team discovered laurel wilt and its vector in St. Lucie, Martin, and Highland counties, placing the disease about 100 miles from the avocado production area. Palm Beach, Broward, and Miami-Dade counties were intensely surveyed and 18 redbay ambrosia beetle traps were placed strategically throughout this region. DPI and USDA Fruit Fly Detection Program (FFD)

personnel in Palm Beach, Broward, and Miami-Dade counties were trained on how to set up sentinel survey trees along their trap lines. This additional program included one sentinel site within an FFD trapper's territory for regular monitoring in conjunction with their regular fruit fly trapping duties.

On February 5, 2010, a single redbay ambrosia beetle was discovered in a sentinel RAB trap in the Kendall area of Miami. Within a week of the find, several additional traps were placed in the immediate area. and plans for an intensive survey and trapping initiative were initiated. By the end of March 2010, and with the help of DPI, USDA, and Citrus Tree Survey personnel, the RAB traps in the Kendall area totaled 98. These traps were checked and monitored on a biweekly basis through June 2010 and all beetle samples were screened at DPI-CAPS. No more redbay ambrosia beetles were found. By mid-June, it was decided to remove half of the traps in the area and step down the monitoring efforts to once per month collections.

No evidence of laurel wilt or the beetle *Xy-leborus glabratus* has been observed within the Miami-Dade County survey area to date.

Small Grains Survey

In Florida, there are three small-grain crops grown in quantity: wheat, oats, and rye. Wheat and oats are more commonly grown followed by small acreage of rye. Most small grains in Florida are grown in the northwest counties of the state located near the Georgia state line. Of these counties, the highest producing are Jackson, Escambia, and Calhoun. The Florida CAPS program chose to survey for four of the pests

with likely pathways into the state, including the wheat bug, *Nysius huttoni* White; the rice cutworm, *Spodoptera litura* (F.); and the old world bollworm, *Helicoverpa armigera* (Hübner), all of which pose a serious



threat to wheat, oat, and rye production in Florida. The rust disease caused by *Puccinia graminis tritici* race Ug99 will also be surveyed for concurrence with the other pests.

Florida's 2008 wheat acreage was almost double that of 2007 going from 13,000 to 25,000 acres. The value of the 2007 wheat crop was \$2,206,000. Although Florida's acreage is relatively small compared to other states to the north, Florida's wheat can serve as a springboard for exotic wheat pests to move northward throughout the wheat production areas, which for 2008 was estimated to be approximately 63.5 million acres.



The Florida CAPS team surveyed wheat, rye, and oats in Calhoun, Columbia, Gadsden, Santa Rosa, Okaloosa, Hardee, Hernando, Pasco, Polk, Sumter, Escambia, and Jackson counties as part of a national small grains survey. Pheromone-baited bucket traps and UV-light traps were used, as well as more traditional collecting techniques such as beating and sweeping, and visually surveying a field. Over 2,300 insects were screened and thousands of acres were surveyed in the counties mentioned above. While this survey did result in new county records, no pests of regulatory concern were collected.

Light Brown Apple Moth Survey

In March 2007, a light brown apple moth (LBAM), *Epiphyas postvittana*, was collected

in Berkeley, California. Shortly after this find, the pest was trapped in several other locations in the area. This led to an ICS program and an effort by both the State of California and USDA to eradicate this pest from the U.S. mainland. Florida receives much of its nursery stock from California, so a very real pathway for the introduction of this pest into Florida exists. This prompted the Florida CAPS program to identify and locate nurseries in Florida that receive nursery stock from LBAM-positive counties in California. When a high-risk nursery was identified, Jackson traps baited with an LBAM pheromone lure were placed either within or in the environs of the nursery. At the time of this report, 117 LBAM traps had been placed in high-risk nurseries and cutflower and produce distribution centers. Traps are checked and reported biweekly throughout the year.

Solid-Wood Packing Material Survey

Florida's forest industry contributes \$16.6 billion to the state's economy annually and encompasses almost 16 million acres. Florida's forests are truly unique and are home to plants and animals found nowhere else in the world. Not only do the public forests of Florida provide habitat for its many endemic animal and plant species, but with a relatively mild climate, state and national forests are a major draw for campers year round. Florida is a major trade hub with 12 international airports and 14 deepwater maritime ports and receives material by rail, sea, and air from all over the world. Therefore, Florida is a high-risk state for the introduction and establishment of exotic woodboring insects. Early detection of exotic woodboring insects is critical to successful implementation of response actions.

The expense of trapping and tracking the redbay ambrosia beetle after it had become established in North Florida coupled with the loss of an extremely ecologically important tree (red bay), and the potential damage to avocado production in South Florida, underscores the importance of this type of survey.

In recent years, several invasive species that threaten trees and other natural resources have been introduced into the United States via solid-wood packing materials (SWPM). As mentioned, Florida's ideal environmental conditions and extensive international ports of entry combine to make this state an incredibly high-risk area for the introduction of pests in SWPM. This threat prompted the Florida CAPS program to begin setting traps for species of concern associated with SWPM within or very near Florida's major international maritime ports. At the time this report was written, traps had been set at all major seaports in Florida. A total of 33 traps have been set statewide. This initiative is planned to continue for an unspecified length of time.

Emerald Ash Borer Survey

In June of 2002, Agrilus planipennis Fairmaire or emerald ash borer (EAB) was identified as the causal agent of ash decline in the Detroit metropolitan area. It is believed that this buprestid was brought in on solid-wood packing materials transporting goods from the beetle's native East Asia. The discovery has led federal and state regulators to set quarantines to track the beetle as new finds have been discovered in Michigan, Ontario, Ohio, Indiana, Illinois, Maryland, Virginia, West Virginia, Kentucky, Missouri, Pennsylvania, and Wisconsin.

In its larval stage, the emerald ash borer feeds underneath the bark of an ash tree. developing galleries in the xylem and phloem of the tree which eventually girdle it. This activity will usually lead to the mortality of the tree within three years. Symptoms of EAB infestation include leaf dieback, bark splitting, feeding galleries (often forming a serpentine path along the wood grain of an affected tree), epicormic shoots, and small D-shaped holes where an EAB has emerged from the trunk after completing the larval stage of its life cycle. In its native habitat, EAB is a relatively uncommon insect, but the lack of domestic predators and parasitoids have left some researchers with the expectation of total loss of ash tree cover.

In Florida, ash trees are an important part of the forest habitat as well as a useful commodity. As an attractive, fast-growing hardwood, the ash is valued in the landscaping industry, and its strength-to-weight ratio makes it a favorite among carpenters, who use it in the construction of baseball bats, furniture, flooring, musical instruments, and many other useful items. Although Fraxinus does not constitute the most dominant genus in the tree canopy. the ash's fast-growing nature and high-seed production make it an important colonizer of disturbed areas of the forest, and integral for the prevention of soil erosion in the riparian environments where, in Florida, most species grow. The disappearance of the four ash species that grow in Florida will have a direct effect on many other species. For one, it would tax the already rare and endangered population of ghost orchids, Dendrophylax lindenii. Of the thousand or so of these rare and exotic epiphytes left, 95 percent are growing on Florida's native

ash. Other species that depend on ash are the giant sphinx moth (*Cocytius antaeus*), great ash sphinx (*Sphinx chersis*), and the angel moth (*Olceclostera angelica*).

The lures used for this trapping initiative are either just manuka oil or a manuka oil/ phoebe oil mix that is placed in a purple prism trap before hanging. The number of traps per park ranges from a low of two to a maximum of four per park, depending on the size of the park. Traps are checked on a monthly basis and lures changed on a bimonthly basis. During 2009, almost 900 beetles were screened, sorted, and identified from state parks, state forests, national forests, and other locations with a high density of ash trees. This trapping initiative led to three new state records including a eucnemid, Isorhipis nubila (Bonvouloir), and two scolytids in the genus Hylocurus. During the first half of 2010, the latest data available indicates that 167 beetles were screened, sorted, and identified, and one new county record has resulted for a leafhopper, Agalliopsis cervina Oman, which was found on one of the purple prism traps in Glades County. At this time, 175 purple prism traps are active in 36 counties. These traps are located in state parks, national forests, and private campgrounds. No emerald ash borers have been detected in samples taken from these traps. This survey will continue in fiscal year 2010-2011.

Oxycarenus hyalinipennis Survey

Oxycarenus hyalinipennis is a significant global pest of cotton that was detected in 2010 just offshore of Florida. The cotton seed bug, Oxycarenus hyalinipennis (Costa 1847), is a small lygaeoid pest of cotton. The insects feed on the seed, and fluids from their bodies can stain the bolls,

requiring additional processing to remove color from the cotton fibers. While the insect's origins may lie in southern Europe and North Africa, it has since expanded its range to become a cosmopolitan pest with a global distribution.

In the Western Hemisphere, the cotton seed bug was first documented in the North Caicos Islands in 1991 (Slater and Baranowski 1994); and by 2005, it had been observed throughout the Turks and Caicos, the Bahamas, the Cayman Islands, and Hispaniola (Baranowski and Slater 2005). Surveys were conducted by the Florida CAPS program in an effort to detect any early presence of the cotton seed bug in the Florida environs as follows:

- A survey in the Bahamas in 2007 (Smith and Brambila 2008) found the cotton seed bug established in high density.
- With the help of U.S. National Park Service officials, a survey in the Everglades National Park, Florida Keys, and southeastern Florida area on July 8-10, 2008, found wild cotton plants at nine different sites. No cotton seed bugs were found, so the wild cotton sites were established as sentinel sites.
- A survey of the Florida Keys, in cooperation with Florida state parks representatives, was conducted during October 28-29, 2009. Eighteen sites were visited, and six new sentinel sites were established.
- Surveys were conducted through direct examination of plants, examination of harvested plant material, and through an overnight UV-light trapping. The target pest was not detected at any site surveyed.



– On March 23, 2010, while conducting fruit fly detection activities in the Florida Keys, a USDA-PPQ technician collected suspicious specimens at a residential property from *Gossypium* sp. on Stock Island. The specimens were confirmed by FDACS and PPQ identifiers as *Oxycarenus hyalinipennis*. In late March, in response to the find, additional samples were collected from the initial detection site at Stock Island to determine the population density and structure. Cotton plants in the front yard were heavily infested, with 1,200 nymphs, and 382 adults (207 males, 175 females) in the sample. Cotton plants in the backyard were moder-

 On April 5, 2010, FDACS-DPI and USDA-APHIS Investigative and Enforcement Services (IES) personnel arrived at the initial detection site and removed and destroyed

ate to severely infested, with 215 nymphs, and 46 adults (20 males, 26 females) in the

sample.

all cotton plants on the property.

- On June 14-18, 2010, a further survey of the Stock Island and surrounding areas was carried out. Additional populations of O. hyalinipennis were discovered at Fort Zachary Taylor State Park on newly detected native cotton plants along the northern fence line of the property. These infestations ranged from slight to moderate in intensity, and male-biased sex ratios suggested an early infestation. Only two of six cotton plants within the immediate area were infested, and no O. hyalinipennis were detected at any other site within the park. State plant inspection regulatory personnel removed the two infested plants and four additional plants within 10 meters of the find on July 1, 2010.

As this pest represents such a significant threat to the American cotton industry, continued surveys of established sentinel sites will be performed on a quarterly basis. Additional sites growing okra (another host of *O. hyalinipennis*) in the Redlands farming area are already being surveyed prior to harvest. UV traps will be left out overnight in cooperating growers' fields during the growing season. Future surveys will also include wild cotton sites in southwestern Florida and kenaf sites in north-central Florida.

Giant African Land Snail Survey

The mollusk family Achatinidae contains several different species, all with the potential to become established in the United States. Most notorious among this group are the giant African land snails (GALS). Achatina fulica (Bowdich) and Archachatina marginata (Swainson) are referred to as the



truly giant African land snails and are also referred to as the travelling species, in that both have moved or been moved all over the world (Mead and Palcy 1992). *Archachatina marginata* and *A. fulica* are species native to eastern Africa; however, they are now distributed globally throughout the tropics and subtropics. Commerce and intentional spread by man appear to be the most likely pathways for introduction of this pest to the United States (Lambert and Tillier 1993).

Giant African land snails are a potential threat to a wide variety of crops, including vegetable, field, oil, ornamental, and fruit crops. More than 500 host plants have been identified in several genera. Not only are these snails agricultural pests, but they can also cause structural damage to buildings by consumption of plaster and stucco, and in large numbers can cause extensive damage. These snails are also a threat to public health because of their ability to spread diseases to animals and humans. They are known to be effective transmitters of the rat lungworm, Angiostrongylus cantonensis (Chen), which in humans produces eosinophilic meningitis (Kliks and Palumbo 1992). These diseases can be transferred

to humans by eating raw, undercooked, infected snail meat and fluids, or contaminated vegetables. Humans can also be infected by handling live GALS if the secretions contact mucus membrane of eyes, nose, or mouth.

A recent news program by Maria Laria (originally broadcast by Telemundo Networks) alleged that snails similar to this aggressive species may have been used by unorthodox practitioners during Santeria rituals conducted in Hialeah. Miami.

In response, a survey for GALS was conducted in the Hialeah and Kendall West areas in Miami-Dade County with CAPS, FDACS-DPI, USDA-APHIS-PPQ, USDA-APHIS-IES, and FDACS-OALE during the week of February 15-18, 2010. The survey was visual and focused on high-risk areas. In most cases, baits and traps are not very effective or practical. These visual surveys took place in a 1.5-mile buffer zone around suspected points of entry. Railroads, street intersections, and canals were principal areas of survey due to their importance to many who practice Santeria. In addition, wooded or natural areas, alleys, and parks were surveyed because they can harbor populations of snails. No GALS were found, and a follow-up survey is planned for fall 2010 using snail-detector dogs.

Mikania micrantha Survey

Mikania micrantha Kunth, mile-a-minute, is a fast-growing vine on both the federal and Florida noxious weed lists (USDA-APHIS-PPQ 2006; FDACS-DPI 2006). It thrives in warm and humid environments, growing almost half a meter per week under optimal conditions. While native to Central and

South America, its global range expanded to cover Southeast Asia and the Pacific during the 1940s when it was used as camouflage for airfields. As a rapidly growing climbing vine, it can smother and overwhelm other small plants and even large trees. Left uncontrolled, it can cover abandoned disturbed areas in only a few months and then spill over into agricultural areas. It can be difficult for specialists to identify. Under casual examination, *M. micrantha* may be confused with *Mikania scandens* (L.) Willd., a close relative and native Florida plant. Mile-a-minute is considered to be one of the top 100 global invasive pests.

Populations of the weed were reported in the Redlands area of Homestead in November 2009 by Dr. Keith Bradley of the Institute for Regional Conservation. Identification confirmations were made shortly thereafter by FDACS and USDA taxonomists.



Beginning on November 30, 2009, CAPS and DPI personnel visited the four sites observed by Dr. Bradley to reconfirm his findings and to familiarize themselves with the plant in the field. Survey teams drove on the roads or shoulders at 10 to 25 miles per hour while looking for the presence of the distinctive white clusters of *Mikania* spp. blooms. When suspicious flowers were observed, the surveyors recorded GPS coordinates for each suspect site. A plant sample for each suspect plant population was sent to Dr. Richard Weaver. FDACS-DPI botanist, for identification. An additional survey conducted the week of December 28, 2009, expanded the original survey area to include major roads outside of the initial survey, approaching natural areas on the east and west sides, and going as far north as Southwest 168th Street and as far south as Southwest 344th Street.

With the assistance of DPI personnel, CAPS began eradication of visible plant material and intensified their survey program the week of January 11, 2009, focusing on clearing the 18 areas identified during previous CAPS surveys and DPI nursery inspections. Removal of the noxious weed was achieved using manual stripping of the vine from fences and host plants, as well as uprooting vines at their base when possible. Plant material was then incinerated at a local USDA facility.

Locating further *Mikania* infestation areas has been a priority for DPI plant inspectors and CAPS Pest Survey Specialists during 2010. Ongoing reporting and mapping of sightings is kept up to date, and a further delimitation/removal survey is planned for fall 2010.

SUPPORTING FLORIDA AGRICULTURE

Blue Gum Chalcid Wasp Survey

The first U.S. detection of the blue gum chalcid (BGC), Leptocybe invasa Fisher and La Salle, occurred in Broward County in July 2008. This wasp causes galls on petioles, leaf midribs, and stems of new growth of several Eucalyptus species, including E. botryoides Sm., E. bridgesiana R.T. Baker, E. camaldulensis Dehnh., E. globulus Labill., E. grandis W. Hill ex. Maiden, E. gunii Hook. F., E. robusta Sm., E. saligna Sm., E. tereticornis Sm., E. viminalis Labill. (Mendel et al. 2004). Heavy infestations can cause severe injury due to leaf distortion and stunting, especially in seedlings or young growth. Damage may also be severe on new growth of mature trees.

Although several *Eucalyptus* spp. can be found in landscape settings and experimental plantings in many areas of Florida, commercial production is limited to Glades County. *E. grandis* and *E. robusta* currently occupy approximately 20,000 acres and are used exclusively to produce mulch. Stumps re-sprout or are coppiced after harvest to produce multi-trunked plants that can be harvested again five to seven years later.

A survey of Florida's only commercial *Eucalyptus* production area in Glades County was conducted on July 15, 2009, with the objective of detecting evidence of BGC. Fields that had been harvested approximately six months earlier were selected for survey. Trees in these fields were ideal for the establishment of BGC due to large amounts of new growth, and were also ideal for survey since this growth was within arm's reach. Newly developed lower leaves on larger trees were also examined.

Survey teams focused on field edges and attempted to reach all four sides of each field. Latitude and longitude of each field surveyed was captured using GPS. Galls observed on leaves, petioles, or stems were collected and submitted to the division lab in Gainesville for identification of a causal agent.

Secondary post entry quarantine areas located in Glades County were also surveyed for BGC on August 20, 2009. Future surveys are planned for sites in Okeechobee and Highlands counties. BGC was detected in four commercial *Eucalyptus* fields in Glades County on both *E. grandis* and *E. robusta*, but was not detected in any of the secondary post entry quarantine areas. This pest can be found in Broward, Glades, Hendry, Lee, Miami-Dade, and Palm Beach counties. A follow-up survey for BGC is planned for August 2010.

Domestic Security and Emergency Preparedness

The Department continues to work diligently to assure that Florida's agricultural resources are safe from terrorism and prepared for all types of disasters. The Office of Agricultural Emergency Preparedness, established shortly after the terrorist attacks of 2001, coordinates with all of the Department's divisions and offices to assure that their diverse programs are consistent, integrated, and equipped for success.

Florida continues to be a national leader in the amount of federal homeland security funding used for the protection of food and

ANNUAL REPORT 2009 / 2010

SUPPORTING FLORIDA AGRICULTURE

agricultural systems. For the 2009-2010 fiscal year, the Office of Agricultural Emergency Preparedness assisted the Department in obtaining \$1.48 million in grant funding from the United States Department of Homeland Security and the Centers for Disease Control and Prevention. This funding was used to support key Department initiatives including:

- Support for technological advances at Agricultural Interdiction Stations (Office of Agricultural Law Enforcement)
- Training and support for All-Hazard Incident Management Teams (Division of Forestry)
- Support for laboratory enhancements
 (Agricultural Environmental Services, Animal Industry, and Food Safety)
- Training and support for the State Agricultural Response Team (led by the Division of Animal Industry)
- Training and support for the Integrated
 Rapid Response Team (led by the United
 States Food and Drug Administration in
 partnership with the Division of Food Safety
 and all other Florida food regulatory partners)

Another important initiative led by the Office of Agricultural Emergency Preparedness was an effort to ensure that emergency personnel are fully prepared for an agroterrorism attack or other large-scale disaster directly affecting Florida's food and agriculture system. Six agroterrorism preparedness training courses, developed by the Western Institute of Food Safety and Security (WIFSS) and certified by the United States Department of Homeland Security,



were offered in 12 venues across Florida. More than 700 participants received indepth training during 20 course offerings in Pensacola, Tallahassee, Jacksonville, Gainesville, Orlando, Tampa, Sarasota, Fort Myers, West Palm Beach, Fort Lauderdale, Miami, and Homestead. Attendees included Department employees, participants from industry, and diverse government partners from local, state, and federal agencies. Because of the high level of interest and the quality of the instruction, additional courses will be offered throughout Florida during the next fiscal year.



Florida Agricultural Promotional Campaign

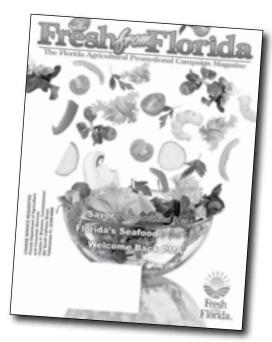
The Florida Agricultural Promotional Campaign (FAPC), often referred to as "Fresh from Florida," is a promotional program designed to enhance the image and increase sales of Florida agriculture. The campaign helps both domestic and international consumers easily identify agricultural products grown and produced in the state. It also works to increase public awareness of the importance of Florida's agricultural industry.

There are two levels of FAPC membership: paid and nonpaid. There is a \$50 annual fee for paying members. This category includes producers, packers, repackers, processors, brokers, shippers, co-ops, agriculture supporters, and industry associations/organizations. Nonpaying members include retailers, food service, nonprofits, wholesalers, and educational and governmental organizations.

Members receive a number of benefits including the usage of "Fresh from Florida" logos, the opportunity to participate in industry trade shows at a reduced cost, point-of-purchase materials to help promote their Florida agriculture commodity, company listings on the online "Ag Product Search" website, and the chance to participate in the Logo Incentive Program. The purpose of the Logo Incentive Program is to provide members with the opportunity to offset a portion of their printing costs on packaging, cartons, labels, and business vehicles while promoting "Fresh from Florida" products. Members may be reimbursed up to \$2,000.

The Department is continually working to develop marketing strategies to assist in promoting Florida's agricultural products in the United States and abroad. Now in its 20th year, FAPC has successfully led to increased sales and public awareness of Florida's agricultural industry and its vital importance to the state's economy.

"Fresh from Florida" Magazine



The FAPC magazine, "Fresh from Florida," is published twice a year. This glossy, full-color publication promotes Florida's agriculture industry through feature articles on members and industry-sponsored events, educational information relating to the state's present and future farmers, and seasonal articles on specific commodities. The magazine also includes recipes and articles promoting better nutrition from the Department's executive chef. Ten thousand copies of each issue are printed and distributed to all FAPC members, national and international produce and seafood buyers, attendees at trade events, and other agribusiness industry professionals.



Xtreme Cuisine Cooking School

Childhood obesity has more than tripled in the last 30 years, and many of those children are contracting type-2 diabetes, heart disease, and other diseases previously seen only in adults. Consequently, health and fitness issues are at the forefront of today's news. To address these issues, the Division of Marketing and Development developed the "Xtreme Cuisine" curriculum to teach Florida youth how to prepare nutritious and tasty treats using Florida fruits and vegetables, whole grains, low-fat dairy products, and lean meats. The cooking classes also teach kids how Florida produce provides vitamins and minerals that can help prevent heart disease and other obesity-related illnesses. In addition, students learn the dangers caused by excessive amounts of salt, sugar, and fat in their diet.

In 2009 and 2010, Florida youth workers taught "Xtreme Cuisine" concepts to 2,720 students in 17 cities. Through Florida Farm Bureau offices, 4-H programs, public and private schools, and other youth settings, students are learning how to make their own healthy snacks by using "Fresh from Florida" products and other nourishing ingredients.

The "Xtreme Cuisine" Chef Demo Contest was held to offer students an opportunity to learn advanced cooking techniques, prepare recipes, and spend a complimentary session with Chef Justin Timineri. Students made fruit sushi, guacamole dips, and fruit kabobs. They also played "Start Farmin," a life-sized board game developed for agriscience youth events.

Agriscience Education Leadership Program

In 2009 and 2010, 14 agriscience teachers and supervisors met six times and traveled to more than 50 different sites relating to agriculture. The participants expanded their understanding of Florida agriculture and natural resources, and in return were able to expand their curriculum to include all components of agriculture.

Through the Agriscience Education Leadership Program, the Department familiarizes Florida's teachers and supervisors with the complexity and diversity of Florida's agricultural system so they can spread the industry's vision throughout their schools. This unique hands-on program promotes a greater understanding of the agricultural industry and its careers, professional development, networking, and leadership. It encourages teachers to build working relationships with the industry across the state; it also encourages teachers to continue teaching agriscience education.

The Florida Department of Agriculture and Consumer Services and the Florida Department of Education created the training program nine years ago. Participants are nominated by their school district's superintendent and then selected by a special

committee based on application information and essay answers.

"Fresh From Florida Kids"

Fiscal year 2009-2010 marked the third year of the "Fresh From Florida Kids" program. The campaign was created to introduce fresh, healthy foods at an early age to help infants and toddlers develop a preference for fresh foods rather than processed foods. The campaign also focuses on helping mothers learn how to quickly and easily prepare healthy baby foods using fresh Florida fruits and vegetables.



The program is divided into three phases over two and a half years. Each phase represents a child's eating behavior, spanning from six months to three years old. Parents are surveyed at the end of the program, which helps to evaluate its success. Plans for 2010-2011 include expanding the program to provide information for parents of children up to age six.

The web site www.FreshFromFloridaKids. com helps parents learn about healthy baby foods. This site contains more than 100 recipes, cooking and storage tips, and detailed health and nutrition information for both children and parents.

African-American Health and Nutrition Campaign

The Department participated in the annual Speaking of Women's Health and Universal Sisters events in Jacksonville. Both conferences are designed to celebrate women of color and educate them about preventative health care. The events address the unique health concerns of women of color. Local television station WJCT, Baptist Health, the Women of Color Cultural Foundation, and "Fresh from Florida" were among the contributing sponsors of the event. The conference featured keynote speakers, small group sessions, and free health screenings in an effort to provide vital health information related to women of color. More than 1,500 conference participants and exhibitors received a "Fresh from Florida" shopping bag full of fresh produce.

Division staff attended the Florida Classic Fan Fare in November 2009 to further promote health and wellness among minorities. The Florida Classic Fan Fare is the annual event held just before the football game between Florida Agricultural and Mechanical University and Bethune-Cookman University. Each year the event brings more than 70,000 fans to the Florida Citrus Bowl in Orlando.

Hispanic Health and Nutrition Campaign

In 2009 and 2010, the Department printed Florida agricultural products brochures in Spanish to be distributed at Hispanic events and retail stores. A bilingual activity book for children was also created and distributed to migrant student educational programs throughout Florida. The "Flavorful Seasons" cookbook was translated to Span-

ish and made available online at the www. Florida-Agriculture.com web site.

As part of the Hispanic outreach program, a soccer-themed promotion called "Somos tu gran fuente de rendimiento" was created. This translates to "We're your great source of endurance." The campaign encouraged Hispanic soccer fans and athletes to consume Florida produce before and after games as a way to improve their endurance.

Justin served samples of fruit and vegetable sushi to thousands of attendees and conducted cooking classes for children at the event.

In March, Chef Justin conducted cooking demonstrations at the Publix Apron's Cooking Schools in Jacksonville, Tampa, Sarasota, and Boca Raton. Florida agricultural products brochures were also available at Publix stores in Florida during the month.

The Department's culinary program assists Florida agriculture producers by promoting fruits, vegetables, seafood, and valueadded products from Florida. Chef Justin is able to highlight these quality ingredients at local, state, national, and international events, thereby leading to increased interest in purchasing Florida agriculture products.

Culinary Promotions

Award-winning chef Justin Timineri serves as the culinary ambassador for the state of Florida. His job as executive chef is to promote Florida products by creating new recipes, attending trade events, performing cooking demonstrations, and educating children about health and nutrition. He supports Florida's agricultural industry by creating healthy modern-style dishes that reflect the state's diverse population. Chef Justin's philosophy is that cooking should always be fun, simple, and flavorful.

In February, the Department was a sponsor at the South Beach Wine and Food Festival's "Fun and Fit as a Family" event. Chef

Advertising Campaigns

There were nine different advertisements that ran in a variety of consumer and industry publications, as well as online websites, throughout the year. The ads were created to target consumers and industry audiences at the same time. The print ads appeared 21 times, while the online ads ran 16 times, for a total of 28 ads in the 2009-2010 fiscal year.

A football-themed radio advertisement was created in 2009 that ran on sports radio networks during Florida State University, University of Florida, University of Miami, University of Central Florida, and University of South Florida games. The 30-second spot promoted Florida's "top picks" of fresh fruits and vegetables and captured more than 14 million consumer impressions.

Social Media Outreach

In 2009 the Division of Marketing and Development created a number of online profiles and content to connect with a broad group of both consumers and industry representatives through social media. In 2009-2010, the social media networks allowed the Department to reach more than 10,000 consumers and industry professionals.

The "Fresh from Florida" blog at http:// freshfromflorida.wordpress.com is used to promote members of the Florida Agricultural Promotional Campaign (FAPC), let consumers know when products are in season, share recipes and cooking tips, and bring attention to important issues related to Florida agriculture.

The Florida agriculture Facebook page at www.facebook.com/FloridaAgriculture is used to routinely interact with supporters of Florida agriculture by sharing photos and news, as well as asking and answering questions.

Twitter, the popular microblogging web site, has been utilized by the "Fresh from Florida" program to share news and information with a large group of consumers and people in the agriculture industry across the country. The "Fresh from Florida" Twitter page can be found at www.twitter.com/freshfromFL.

Retail Campaigns: Global Grid and Winners Circle

For the seventh straight year, retail campaigns "Global Grid" and "Winners Circle" have involved more than 10,000 stores worldwide. This level of penetration in the retail sales environment is unprecedented

and demonstrates the Department's commitment and capability to assist Florida's agricultural producers in retaining and expanding sales in domestic and international markets.



"Global Grid" is the largest retail operation conducted by the Department, with more than 30 retail partners representing more than 10,000 stores worldwide. Known as "Northern Exposure," "PowerGrid," and "Storming Across North America" in past years, this program tops the more than 200 marketing enterprises conducted by the Department each year to generate sales and advertising impressions. Retaining a strong presence in the United States and Canada is of primary importance. Measuring results is critical to managers, and exports of fresh Florida fruits and vegetables to Canada have soared with "Global Grid." Prior to launching the retail campaign, exports of fresh fruits and vegetables from Florida to Canada totaled \$291 million and were growing by a few percent each year. By 2009, Florida agriculture exports totaled \$623 million. In addition, store ads have skyrocketed in Canada as well, from a few thousand to more than 110,000 in

2009. Total individual store advertisements generated by the Department's retail campaigns began with 22,000 in 2002 to more than 362,000 during the 2009-2010 program year.

Finishing a 10th year, "Winners Circle" remains focused on retailers in Florida and surrounding states and included 1,784 stores this year. The program continues to stress the earlier successes of similar retail campaigns like "Chill It or Grill It," "Greetings from Florida Farmers," and "Farmer's Express." Approximately 120,000 individual store advertisements were generated in 2009-2010.

Between November 2009 and May 2010, the combined campaigns included 11,818 stores with 37 retail partners worldwide. More than 11.5 billion consumer impressions were generated from store advertisements. The geographic areas covered include 44 U.S. states, three Canadian provinces, 11 Central American and Caribbean nations, South Korea, and the United Kingdom. Estimated sales generated amounted to \$132 million in farm-gate cash receipts for Florida farmers, creating more than 4,400 new Florida jobs and adding \$17.8 million indirectly to local and state budgets.



Trade Events

PMA: Marketing representatives traveled to Anaheim in October 2009 to attend the Produce Marketing Association's (PMA) Annual Convention and Trade Show. Six Florida companies, consisting of growers, packers, distributers, producers, and associations, attended and displayed produce in the "Fresh from Florida" pavilion. PMA drew more than 18,500 attendees from 50 countries and featured more than 800 international exhibitors.

Anuga: In October 2009, marketing representatives from the Department attended Anuga, a trade event in Cologne, Germany. At the event the Department hosted two Florida businesses that showcased their Florida juice products at the "Fresh from Florida" pavilion. More than 150,000 visitors attended the event, which featured over 6,500 exhibitors from around the world. While the event takes place in Cologne, the majority of exhibitors (5,548) and visitors (93,909) are from countries outside Germany.

IPM Essen: The division partnered with International Pflanzenmesse (IPM) horticulture trade shows in Essen, Germany, and Dubai, United Arab Emirates, in January and March 2010. Florida companies Foremostco and Manuel Diaz Farms participated; Foremostco was at the IPM Essen event, and Manual Diaz Farms was at the IPM Dubai event.

Food and Hotel Asia: The Food and Hotel Asia Show was held in Singapore in April 2010. The Department participated, representing the Southern U.S. Trade Association (SUSTA), which had six booths under the United States pavilion at the interna-

tional food and drink exhibition. More than 52,000 visitors attended the show.

Food Arabia: On behalf of SUSTA, the Department represented six companies at the Food Arabia show in Jeddah, Saudi Arabia, in May 2010. Among the companies exhibiting their products in the SUSTA booth was Bouras Global Trading from Fort Lauderdale. This was the third year of a five-year program to participate in this show.

CPMA: The 85th Annual Canadian Produce Marketing Association (CPMA) Convention and Trade Show was held in Vancouver in May 2010. The trade show hosts more than 240 exhibitors from countries around the world. Joining division staff in the Florida pavilion were representatives from four Florida companies, B&W Quality Produce, Blue Lake Citrus/Noble Worldwide, Pioneer Growers Cooperative, and Southern Specialties. The 239 exhibiting companies from the United States, Canada, Europe, Asia, Central America, and Mexico played host to over 3,300 attendees from more than 13 countries.

American Café: The Department, in conjunction with SUSTA, attended the Casablanca American Café 2010 show in Morocco in June. The trade show was organized by the Foreign Agricultural Service to help U.S. food exporters find importers for their products, become familiar with the markets, and learn about import requirements.

International Marketing

Peru/Ecuador: In the spring of 2010, the Department, in cooperation with the Southern United States Trade Association (SUS-TA), participated in a trade mission to Peru and Ecuador. Four companies participated in the mission, resulting in more than 50 quality Ecuadorian and Peruvian contacts for agribusinesses in the SUSTA region. Peru continues to be one of the most vibrant economies in Latin America, and the passage of the United States-Peru Promotional Agreement has created numerous opportunities and duty preferences for U.S. exporters. Neighboring Ecuador is also showing a stable increase in income and expenditure levels with an annual growth rate of 4.5 percent.

India: India continues to be an important market for many U.S. companies since it is one of the fastest-growing economies in the world. In conjunction with SUSTA, the Department participated in the IFE India Show in December 2009. This is India's principal food, drink, and hospitality show in Delhi. The show was followed by an outbound trade mission to Mumbai, where companies participated in one-to-one meetings with key importers.

Canada: The Department, in conjunction with SUSTA, hosted a Canadian inbound trade mission in the spring of 2010. A group of key retail and wholesale produce buyers from Ontario visited numerous agricultural operations in South Florida. The buyers were able to view fields and packinghouses and learn about the safety practices and technology used by Florida producers. These missions are beneficial for buyers and producers and give everyone a better understanding of how to best work together to meet the demands of the consumer.

Germany/Hungary/Netherlands: Thirteen European horticulture buyers from Ger-

many, Hungary, and the Netherlands visited Medallion, Redland, and LNB Bamboo nurseries in Miami, Peacock Tree Farm in Port St. Lucie, and Jon's Nursery, The Liner Source, and Primrose Garden Center in Orlando in August 2009.

Panama/Costa Rica: Six horticulture buyers from Panama and one from Costa Rica visited The Landscape Show in Orlando in October 2009. The buyers conducted one-to-one meetings with Florida companies Arazoza Brothers, Environmental Turf, Peacock Tree Farms, and SMR Farms, in addition to making contacts with the trade show exhibitors. They also toured Miami farms Botanics Wholesale and Foliage Express.

Spain/ Portugal: According to the "Iberian Peninsula GAIN Report SP6025," the food market for the Iberian Peninsula serves almost 52 million people. The United States and Spain have developed bonds on different fields through the years, and Spain has always been an interesting customer of U.S. companies. In the last few years, Portugal has been emerging as an attractive option for foreign investment and an increasingly attractive market for exports. With this in mind, the Department partnered with the Georgia Department of Agriculture on a trade mission to Madrid and Barcelona, Spain, in November 2009. Outreach was developed in the Iberian Peninsula by conducting a trade mission to Lisbon, Portugal, in March 2010, followed by participation at the Alimentaria Trade Show in Barcelona. Spain.

Cattle Trade Missions

The Department is continually working to attract international livestock buyers.

Florida's livestock breeds, especially beef cattle, are well suited to many areas of the world because they show little or no effects from extremely high temperatures. These animals have adapted to tropical and subtropical climates, making them desirable to producers from countries with similar climate conditions.

In November 2009, a delegation of cattlemen from Florida and Texas, along with representatives from the American Brahman Breeders Association and the Department, attended the Eastern Cattle Show in Pattaya, Thailand. In addition to meeting with local cattlemen, the group was able to visit other agricultural production areas.

In May 2010, representatives from Ecuador, Guatemala, and Nicaragua attended the University of Florida Beef Cattle Short Course. During the program, participants learned about management practices and other issues facing producers. They were able to meet with Florida cattlemen and see some of Florida's fine cattle.

These and other trade missions foster communication between countries and educate producers. Participants learn about issues dealing with production and trade. The missions also contribute to the creation of a friendly business environment.

Florida Thoroughbred Trade Missions

Florida is home to some 600 Thoroughbred farms and training centers, with more than 75 percent of these located in the Ocala/Marion County area. These farms, training centers, and breeding and racing stock create an economic impact estimated at \$1 billion annually.



The Department continues to attract international buyers by conducting trade missions from Florida and hosting reverse trade missions into the state. Trade contacts initiated by the Department have resulted in more than \$5 million in Florida horse exports. This number is expected to grow as Florida marketing representatives continue to facilitate trade missions with foreign buyers. During 2009-2010, the Department sent an equine trade mission to Italy and conducted reverse trade missions for delegations from Korea, Italy, and Ireland. These missions were co-hosted by the Florida Thoroughbred Breeders' and Owners' Association, with the purpose of educating foreign buyers on the quality and value of Florida's equine industry.

Seafood and Aquaculture Marketing

The Bureau of Seafood and Aquaculture Marketing provides marketing strategies for Florida's seafood and aquaculture industry to facilitate buying, selling, and the promotion of Florida seafood and aquaculture products. The mission of the bureau is to

market Florida products to consumers and help the seafood and aquaculture industry increase sales.

The bureau produces educational materials for consumers. It provides promotional materials, and training on handling and storage safety for retailers, foodservice professionals, wholesalers, and processors. The bureau provides educational and technical support and training for fishermen, aquaculturists, retailers, and foodservice professionals. It serves as a liaison for aquaculturists, commercial fishermen, government agencies, and the consuming public by utilizing the expertise of industry advisory councils. The bureau provides public relations to the media on behalf of the seafood. aquaculture, and marine life industries. It also provides marketing services, including electronic marketing programs identifying U.S. and international buying and selling operations. It assists and promotes Florida industry through the distribution of recipe brochures and educational materials to visitors at seafood festivals throughout the state and at industry trade events both at home and abroad.

The Bureau of Seafood and Aquaculture Marketing strives to increase the industry's sales and profits through global marketing and education. Bureau activities generated 818 million consumer impressions nationwide with a sales value of approximately \$59.3 million. Chief among the audiences served are:

 Consumers, who seek information about how to wisely purchase, prepare, serve, and store seafood and aquaculture products. Consumers are reached by means of printed materials, news releases, and public

service announcements through television, radio, print media, and appearances at regional seafood festivals.

- Producers (fishermen, processors, and aquaculturists), who turn to the Department for technical, educational, marketing, and promotional assistance, as well as safety, handling, and storage information. The Department's marketing and promotional programs use the "Fresh from Florida" logo and are backed by a multilevel campaign creating consumer awareness and interest and fueling demand for Florida products.

TV Consumer Shows

On a regular basis during the year, staff prepared culinary segments featuring Florida seafood, fruits, vegetables, and other Florida products on the CBS television affiliate in Tallahassee. The recipes used in the segments demonstrate the ease of cooking fresh Florida seafood at home. During the culinary features, bureau staff pointed out the many health benefits of eating fresh seafood. Florida seafood highlighted in these segments included wild-caught shrimp, flounder, yellow fin tuna, spiny lobster, oysters, grouper, blue crab, red snapper, farm-raised clams, stone crab, mahimahi, and yellowtail snapper.

SUSTA Activities

The Bureau of Seafood and Aquaculture Marketing continued its international marketing activities through its affiliation with the Southern United States Trade Association (SUSTA). SUSTA is a non-profit agricultural export trade development association comprised of the departments of agriculture of the 15 southern states and

the Commonwealth of Puerto Rico. SUSTA helps southern U.S. exporters promote high-value food and agricultural products throughout the world.

China: In the first year of China market development for alligator hides and skins, bureau staff and SUSTA member businesses comprised a delegation conducting market research in Shanghai, China, from August 30 to September 4, 2009. The delegation of U.S. alligator producers visited Shanghai to learn more about Chinese trade opportunities. Through discussions with the Agricultural Trade Office staff, meetings with Chinese companies who had interest in American alligator, visits to retail stores in upscale shopping areas, and attendance at the All China Leather Exhibition hosted by the China Leather Industries Association, the delegation developed a more complete picture of the market for alligator hides and skins in China. Two meetings were held with at the FAS Agricultural Trade office. During the first meeting, the group heard from Wayne Batwin and Alan Hallman, Director and Deputy Director, respectively, of the Shanghai Agricultural Trade Office, and Wendy Zhou, the Agricultural Marketing Assistant. Wayne Batwin spoke of the Chinese market and explained some of the nuances involved in ultimately trading with the Chinese.

Busan International Seafood and Fisheries Expo: With SUSTA funding, Bureau staff and the U.S. Department of Agriculture's Agricultural Trade Office in Seoul, South Korea, facilitated the United States Pavilion in November 2009 at the Busan International Seafood and Fisheries Expo in Busan, South Korea. The expo was a great opportunity for SUSTA companies to

showcase their products for the over 13,000 buyers in attendance. Florida's Culinary Ambassador, Chef Justin Timineri, cooked and served Florida seafood products for interested buyers. This expo enhances Florida's seafood and aquaculture presence and strengthens the state's competitiveness in Asia and the Pacific Rim. The combined participating companies in the U.S. Pavilion reported at-show sales in excess of \$1 million.

European Seafood Expo: On behalf of SUSTA, the bureau coordinated a Southern U.S. Seafood pavilion at the European Seafood Expo in Brussels, Belgium, in April



2010. As the largest seafood-only show in the world, this show attracted over 24,000 buyers and sellers from 140 countries. The four participating Florida companies reported \$26.5 million in sales at the show.

Russia: In its second year of Russian market development, bureau staff and SUSTA member-state businesses participated in LeShow Moscow, a luxury fur and leather trade event, which was held May 18-20, 2010, at the Moscow Delovoy Expocentre.

Finished hides and finished products were prominently displayed. A plasma screen monitor played a DVD with two features that had been subtitled in Russian: "American Alligator Leather" and "Alligator Designs." Accompanying the DVDs was a brochure that had also been translated into Russian. Attendance at a luxury leather goods event of this size in Moscow ensured the participants met the proper trade representatives and prospective buyers to make sales of alligator hides and finished products. A total of \$70,000 in sales was forecasted as a result of this event.

South Beach Wine and Food Festival

Bureau staff served Florida alligator to 15,000 attendees at the 2010 South Beach Wine and Food Festival. Chefs from the Food Network and local restaurants participated. The booth was sponsored by the Florida Alligator Marketing and Education Advisory Committee (FAME).

Public Relations

The bureau's public relations efforts for fiscal year 2009-2010 continued to increase media and consumer awareness about Florida seafood and aquaculture products. This year's initiatives included commodity-specific and informational press releases, event participation, distribution of promotional materials, television cooking segments, and direct media contact. Over \$164 million in ad value was obtained from earned media. This exposure was accomplished by utilizing a multimedia approach at minimal cost for documented articles or features published in print or online.

Fishery Trade Leads

Leads from companies seeking fishery products, obtained from the National Marine Fisheries Service, the USDA's Foreign Agriculture Service, and foreign and domestic companies, are compiled by the bureau and distributed to over 200 Florida seafood and aquaculture companies by e-mail and fax. Trade lead recipients reported sales totaling \$2.5 million resulting from these leads.



International Boston Seafood Show

The bureau coordinated and hosted the Florida Pavilion at the International Boston Seafood Show in March 2010. Florida seafood and aquaculture companies were provided a high-profile opportunity to present and promote their products within the pavilion. Seven Florida companies and the Florida Alligator Marketing and Education Committee promoted Florida seafood and aquaculture products, made new contacts, and generated sales. Over 17,000 international seafood and aquaculture buyers attended the show. Those buyers visiting the Florida Pavilion contributed to an estimated \$7 million in combined sales for companies

exhibiting in the Florida pavilion.

"Sea Notes" Industry Newsletter

To help maintain communication with the Florida seafood and aquaculture industry, the bureau produces "Sea Notes," an electronic newsletter distributed quarterly to seafood restaurants, retail markets, wholesalers, and other seafood allied industry members. The newsletter showcases the bureau's promotional efforts and provides timely Florida seafood industry news. "Sea Notes" notifies recipients of opportunities for industry to be involved in marketing activities coordinated by the bureau.

Florida Seafood Seasons Advisory

The bureau publishes the Florida Seafood Season Advisory, an informational piece to inform Florida's retail, wholesale, and restaurant seafood industry of upcoming seasons as well as other topical information such as changes to quotas and bag limits. This e-mail advisory highlights openings and closures of commercially harvested Florida seafood. In addition to regular monthly distribution, special advisories are sent as warranted when new or updated information regarding a certain species, opening, or closure is received.

Promoting Seafood and Aquaculture on the World Wide Web

The bureau's web site, www.FL-Seafood. com, provides consumers, Florida's seafood and aquaculture industry, retailers, and the press with many downloadable seafood and aquaculture-related brochures, point-of-purchase materials, videos, audio files, photographs, and press releases. For con-

sumers, the web sites features: Florida seafood recipes, nutritional information about seafood, information about popular Florida seafood products, oyster safety information, a calendar of Florida seafood festivals. a list of retailers and restaurants across the state that feature Florida seafood, a history of Florida's coastal fishing communities, a list of suppliers of finished alligator leather products, and tips for handling, storing, and cooking seafood. For wholesalers and retailers the web site provides research and educational information on food safety and handling, trade leads, seafood advisories, the Sea Notes newsletter, and a convenient way for ordering promotional materials.

Industry Support During Gulf Oil Spill

On Tuesday, April 20, 2010, the Deepwater Horizon offshore oil drilling platform exploded in the Gulf of Mexico near Louisiana. The rig, owned by Transocean Ltd., was under contract to BP. The State Emergency Operations Center activated on April 30 in response to this event. The Deepwater Horizon well was capped on July 15, 2010, thus stopping the discharge of oil into the Gulf.

The Bureau of Seafood and Aquaculture Marketing provided informational support to consumers, industry, and government during the crisis. A seafood hotline was staffed with daily messaging on closures, available products for purchase, and other Gulf safety issues. Newspaper ads and web banner ads touting the hotline ran throughout the northeastern United States. A 60-second television public service message was aired throughout northwest Florida and more than 17 million consumer impressions were generated as a result

of the effort. Point-of-sale materials that emphasized the safety of Florida seafood were developed for industry. A "Florida Gulf Safe" logo was created to drive this message.

Additionally, webcams showing Florida businesses actively engaged in selling and serving Florida seafood were set up along the Gulf Coast in the areas reportedly affected by the spill. Bureau staff participated in meetings and weekly informational conference calls to stay up to date on the Gulf oil spill as it occurred.

Bureau of Education and Communication

The Bureau of Education and Communication is responsible for educating and informing consumers through news releases, brochures, and other publications, exhibits and displays, graphics presentations, the Internet, broadcast, and other media. Bureau productions are integral to many projects that are part of the Florida Agricultural Promotional Campaign (FAPC), a program that assists the state's agricultural producers in expanding markets and promoting and selling Florida-grown products. In addition to its role within the Division of Marketing and Development, the bureau also produces numerous projects for other divisions throughout the Department.

During fiscal year 2009-2010, the bureau issued more than 120 press releases to inform the public about various regulatory and promotional activities of the Department. The bureau also responds to inquiries from the public and mails out publications upon request. Approximately 2,600 publications were mailed in response to nearly 500

individual requests received via the Division of Marketing and Development's web site www.Florida-Agriculture.com.

Florida Market Bulletin

The online Florida Market Bulletin provides a forum by which Florida residents can advertise to buy or sell agriculture-related items. During the 2009-2010 fiscal year, 3,253 classified ads were published online.

Video and Radio

The bureau produces and disseminates audio and video productions such as television and radio public service announcements, radio programming, agricultural producer assistance videos, informational/promotional videos, documentaries, and training videos. Major projects produced during the fiscal year included:

- Three 30-minute episodes of "The Florida Report" that explain the Department's agricultural support functions and highlight the practices of various farming operations around the state. Produced in conjunction with the Florida Farm Bureau, these reports aired on RFD-TV, a satellite network that primarily serves rural and farming communities nationwide.
- An informational video about Florida's "Woman of the Year in Agriculture," outlining the lifelong contributions to the state's agricultural industry by the 2009 award recipient, Marcia Lightsey of Lake Wales.
- A documentary video about Florida's commercial fishing industry and its impact on the history and development of the Sebastian Inlet area.

- Three television public service announcements, featuring well-known fishing captains from the Discovery Channel's "Deadliest Catch" series, promoting Florida's commercial fishing industry and the "Fresh from Florida" seafood harvest.
- Two documentary videos about the winners of the 2009 Commissioner's Agricultural-Environmental Leadership Awards, detailing the environmental practices of Dairy Production Systems in High Springs, and Loop's Nursery and Greenhouses, Inc., in Jacksonville.
- An informational video showing the social and economic benefits that county fairs bring to local communities.
- A television public service announcement advising homeowners to keep termite protection contracts in effect and to use only registered pest control companies.
- A television public service announcement showing the economic and environmental benefits of buying food products grown in Florida.
- A television public service announcement explaining the plight of Florida's commercial fishermen in the wake of the Gulf oil spill and encouraging the public to buy Florida seafood.
- A video promoting the Florida State Employees Charitable Contribution Campaign.
- An informational video about the FFA state officers.
- A weekly agricultural radio news program produced in conjunction with Southeast AgNet.

ANNUAL REPORT 2009 / 2010

PROMOTING FLORIDA AGRICULTURE

 Radio spots promoting "Fresh from Florida" agricultural products that aired on various Florida university sports networks.

Graphics

The bureau is responsible for the design, illustration, and production of printed brochures, reports, booklets, posters, bill-boards, ads, and other marketing, promotional and educational materials pertaining to agricultural marketing programs and other activities of the Department. The bureau's graphics section was involved in the production of more than 300 projects during the fiscal year. Major graphics productions included:

- 2009 Department Annual Report. This 128-page report provides an overview of the Department's activities during fiscal year 2008-2009 in supporting Florida agriculture, promoting Florida agricultural products, ensuring a safe and wholesome food supply, conserving the natural environment, safeguarding consumers, responding to emergencies, and promoting employee excellence.
- "Florida Agricultural Statistical Directory 2009," which is produced in conjunction with the Florida Agricultural Statistics Service. This 140-page book provides a statistical examination of Florida's food, fiber, and forestry industries. In addition to agricultural statistics and specialized data, the directory contains price histories and production levels of various commodities, a listing of agricultural groups and associations in Florida, and a listing of producer assistance services offered by the Department.

Commissioner's Agricultural-Environmental Leadership Awards 2009 program booklet, detailing the environmental practices of the two farming operations that received this year's award.



- "Woman of the Year in Agriculture Award"
 2009 program booklet, detailing the award recipient's contributions to the state's agricultural community.
- "Fresh from Florida" magazine, which is sent to members of the Florida Agricultural Promotional Campaign and distributed at trade events and other marketing venues.
- A series of brochures promoting fresh Florida produce items.
- "Green Florida Farms" book for children, featuring an illustrated rhyming story about how Florida farmers work in harmony with the environment as they produce food

and other products for society's use. The book was used in classrooms and at other venues throughout Florida on Agriculture Literacy Day. A coloring book was also developed.

- Numerous informational and promotional brochures, magazine ads, posters, displays, and other miscellaneous graphics projects.

Web Development

The Bureau of Education and Communication designed and maintains the Division of Marketing and Development's two web sites, Florida Agriculture.com and FL-Seafood.com. During fiscal year 2009-2010, the sites received over 673,000 visits, which yielded more than 2.33 million page views.

The sites contain information and materials that help Florida farmers more effectively market their commodities. These marketing tools include trade leads, current market prices, information about the Florida Agricultural Promotional Campaign, agricultural statistics, license and bond requirements, agricultural classified ads, point-of-purchase marketing and promotional materials, and an extensive list of agricultural links for research purposes.

The web sites also foster the notion that the more consumers know about the many agricultural commodities grown in Florida, the more they will choose to buy products that are "Fresh from Florida." The sites inform consumers about the wholesomeness, variety, and availability of Florida agricultural products by providing: recipes for meals using Florida-grown ingredients; nutritional data; seasonal availability information; food handling and safety tips; and locations and

contact information for Florida's community farmers' markets, seafood markets, agricultural fairs and expositions, and wineries and vineyards.

In addition to the division's two primary web sites, the bureau also developed and maintains other web sites that promote the "Fresh from Florida" message, including FreshFromFloridaKids.com, TheFloridaChef. com, and WorkingWaterfronts.com.

The bureau develops and maintains other web sites in cooperation with agricultural organizations that have partnered with the Division of Marketing and Development to promote Florida agricultural products. These web sites include: FloridaWildflowers.com for the Florida Wildflower Seed and Plant Growers Association Inc.; Wildflower-Tag.com for the Florida Wildflower Advisory Council; PropaneFL.com for the Florida Propane Safety, Education, and Research Council; and FIFNC.com for the Florida Interagency Food and Nutrition Committee.

The bureau also produced four issues of the Department's intranet-based employee newsletter, Open Lines.

Food Distribution

The Department administered or provided support through USDA foods and/or cash for a number of U.S. Department of Agriculture programs in Florida, including the National School Lunch Program, Summer Food Service Program, and the Emergency Food Assistance Program that provides USDA foods for distribution to the needy.

During fiscal year 2009-2010, 209 agencies serving about 5,000 public and private

schools, residential childcare institutions, food banks, food pantries, soup kitchens, and other emergency feeding organizations throughout Florida, received over 111 million pounds of USDA food valued in excess of \$95 million. As a result, approximately 2 million people were reached on a daily basis, making Florida's food distribution program the fourth largest in the nation.

The Department is involved in the Food Recovery Program and other programs that endeavor to eliminate hunger and food insecurity in the state. This fiscal year, farmers donated over 7.7 million pounds of fresh produce for distribution to those in need. The Department produces the Food Recovery Resource Guide, which lists organizations involved in food recovery. The guide is available on the Department's web site to the general public and to schools, restaurants, hotels, grocery stores, and other entities involved in the preparation of meals and/or the sale of food.

WIC/Farmers' Market Nutrition Program

The Florida Department of Agriculture and Consumer Services and the Florida Department of Health jointly administer the WIC/Farmers' Market Nutrition Program. This U.S. Department of Agriculture program has two statutory objectives: to provide fresh produce to eligible women and children who are nutritionally at risk, and to help local farmers by expanding the awareness of, use of, and sales at local farmers' markets. During this fiscal year, booklets totaling over \$630,000 in \$4 coupons were provided to 31,669 eligible WIC clients in Alachua, Bay, Escambia, Gadsden, Holmes, Jackson, Lafayette, Leon, Okaloosa,

St. Johns, Santa Rosa, Sumter, Suwannee, Union, Walton, and Washington counties. The Department entered into agreements with 203 farmers authorizing them to participate in the program. Participants can redeem the coupons for the purchase of locally grown fresh fruits and vegetables from authorized farmers at community farmers' markets. WIC/FMNP is a very successful program that provides eligible WIC clients with nutrition education and fresh produce, and participating farmers with new customers. As a result, both groups continue to enthusiastically support the program.



Emergency Response

As the lead agency for Emergency Support Function (ESF) 11, the Department is responsible for acquiring food, water, and ice for distribution to disaster victims. In the event of a disaster, the Bureau of Food Distribution also provides USDA foods to disaster relief organizations for the mass feeding of disaster victims at designated shelters and feeding sites. Water is given out at various points of distribution throughout the affected area while limited amounts of ice are available for distribution to feeding sites and vulnerable populations. Luckily, Florida was spared during this year and it was not necessary for the Department to furnish supplies.



Division of Food Safety

The Department's experienced staff of public health professionals and laboratory scientists monitor over 48,000 food manufacturing/processing plants, retail food establishments, and similar food businesses to ensure compliance with food wholesomeness and safety standards. The Department maintains a close working relationship with the U.S. Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), the Florida Department of Health (DOH), the Florida Department of Business and Professional Regulation (DBPR), and other agencies to share information, avoid duplication of effort, and carry out food safety activities effectively and efficiently.

The Department continues to emphasize proper sanitation and safe food-handling practices in the establishments that it inspects, permits, and regulates. It also provides consumer protection safeguards by checking the accuracy of product labels, net weight, and grade standards. Laboratory analysis is performed to ensure the absence of foodborne pathogens or other contaminants. By administering the Interstate Milk Shippers Program and similar state regulations, the Department assures consumers that dairy products are wholesome and are produced, processed and merchandised under sanitary conditions. These programs also enable Florida dairy farmers to ship their products in interstate commerce.

The Department continues to assist the food industry through training for the im-

plementation of Hazard Analysis Critical Control Point (HACCP) programs. HACCP concentrates on preventing, eliminating, or reducing food safety hazards to an acceptable level; these hazards may occur during any stage of the food production or handling process. Thus far, HACCP training efforts have concentrated on high-risk foods, including seafood, sushi, sprouts, unpasteurized juices, and other high-risk processes such as acidification and reduced oxygen packaging.

One of the Department's major missions is to protect the public from unsafe foods by laboratory surveillance testing for foodborne pathogens, illegal additives or contaminants, misrepresented products, and the presence of pesticides or other chemical residues for the enforcement of established tolerances. The Department is a national leader in the development and implementation of sophisticated analytical techniques and methods to ensure the safety of foods throughout the production and distribution process.

The Department emphasizes the prevention of foodborne illness, and when any situation relating to food safety arises, the Department has the authority to immediately stop the use of improper equipment or to halt the sale of products deemed unsafe to the public. As the lead state agency for food safety, the Department has continued to make preparations in its laboratories and inspection force to respond to any terrorist attacks and other emergencies related to the food supply. Inspectors have been trained as early responders, and the Food Safety Laboratories have key roles in laboratory response, both at the state and national level.

Food and Meat Inspection

The Division of Food Safety has broad consumer protection responsibilities in the area of food safety. The division inspects, permits, and regulates food manufacturing/processing plants, retail food establishments, and similar food businesses in Florida to assure compliance with food wholesomeness and safety standards. During fiscal year 2009-2010, there were 48,398 such businesses in operation in addition to 2,885 water vending machines. A total of 78,494 inspections were conducted, resulting in 3,422 individual food businesses being cited for failure to meet sanitation and food safety standards. Two hundred and sixtythree of those firms received administrative complaints and were assessed \$406,550 in fines. Other regulatory actions resulting from surveillance inspections included the issuance of 5,565 warning letters, 22,970 stop-sale orders, and 11,335 stop-use orders. Personnel from the division issued stop-sale orders on an excess of 2.72 million pounds of food products, with 240,922 pounds of this food ordered destroyed as unfit for human consumption.

The division also initiated administrative actions against 63 food establishments that failed to pay the required renewal fee for a Food Establishment Permit. These establishments were open for business, had been inspected, and were in violation because they were operating without a permit. Permit renewal is required annually under Florida law. Other activities conducted by food inspectors included visits to establishments for consumer complaint investigations, administrative purposes, sample collection, and enforcement actions such as the issuance or removal of stop-sale or

stop-use orders. In addition to sanitation and food safety concerns, inspectors were also involved in a variety of other consumer protection activities. Food labels were reviewed for accuracy and compliance with Federal and Florida requirements. Readyto-eat (RTE) foods were analyzed for a number of dangerous pathogens. Dried fruits were tested for the presence of undeclared sulfites. Ground beef was tested to ensure the amount of fat was correctly stated on the label and that poultry or pork products had not been added. Eggs were examined to verify labeled grade and size. Fish were tested to ensure accurate species labeling. Products were tested for "no sugar" or other heath claims. Other foods received similar safety and quality checks.



The Division of Food Safety continued the surveillance of herbal dietary supplements containing harmful compounds. Ingestion of products containing ephedrine alkaloids (sometimes called ma huang, sida cordifolia, or pinellia) has been associated with several deaths, including at least one in

Florida. Inspectors from the division maintain surveillance activities for these banned products and issue stop-sale orders for ephedrine-bearing dietary supplements when found.

An equally important part of the food inspection program is response to consumer needs and concerns. During fiscal year 2009-2010, over 55,717 telephone calls were received, in addition to hundreds of calls either forwarded to or received directly by staff. Division staff also responded to 3,182 e-mail inquiries, and numerous facsimiles and letters from consumers as well as permitted firms. There were numerous inquiries regarding food and food-handling practices, or expressions of concern about food establishment conditions. More than 2,215 consumer complaints were investigated with the complainant being advised of the findings unless anonymity was requested.

The Division of Food Safety continues to work closely with its federal partners, FDA and USDA, on food safety-related activities. Under a contractual arrangement with the FDA, the division conducted inspections at 490 interstate food manufacturers/processors, which consisted of 360 sanitation and 130 seafood HACCP inspections for the 2009-2010 contract year. Under the FDA contract 53 product samples were collected consisting of a variety of produce products, which were analyzed for Salmonella, mycotoxins, and pesticides. This year a new environmental-sampling elective was implemented under the FDA contract. The division collected a total of 202 environmental samples from four different nut processors, and the samples were analyzed for Salmonella in the division's Food Laboratory.

The division and the FDA also continued with partnership agreements in several program areas that helped avoid duplication, fostered the sharing of information, and assisted each other in carrying out food safety activities. Under a cooperative agreement with USDA, the division continued to provide egg and poultry grading and inspection services for 167,778 tons of eggs and 122,934 tons of poultry. To expedite the terms of these types of agreements, many of the Department's personnel are commissioned by the FDA while others are licensed by the USDA. Other related activities in conjunction with the USDA include periodic inspections for food products illegally imported for sale such as: illegal invasive plants, plants and animals from prohibited disease- and/or pest-infested areas and meats from areas known to have Foot-and-Mouth Disease, hog cholera, and Bovine Spongiform Encephalopathy (mad cow disease).

Under another cooperative agreement with the USDA, the Division of Food Safety continued to monitor the labeling of the country of origin of any fresh fruit or vegetable produced outside the United States. With the new Country of Origin Labeling (COOL) agreement, produce plus four other commodity groups must be identified to consumers at retail food stores. This identification is accomplished through labeling of individual items or by signage at the point of sale. During the fiscal year, the Division of Food Safety conducted 651 retail food store compliance audits.

In its third year, the Special Inspection Team (SI Team) continues its focus as first responders to various food-related issues, public food supply, conducting in-depth,

independent assessments and inspections and by tracking sales of illegal food items as well as food products implicated in foodborne illnesses. The team also conducts trace-backs and trace-forwards to determine the origin and destinations of illegal products and those items involved in local and nationwide recalls. In keeping with the division's emphasis on high-risk activities, the team addresses those issues of greatest potential harm to the consumer.

Conducting joint investigations with local Food Safety district supervisors and inspectors in addition to various government agencies, the SI Team last year worked 331 cases involving suspicious and illegal products, unpermitted establishments, and cases in which products were found to have been adulterated. These items were found violative for unapproved source, temperature abuse, filth, decomposition, or were processed under unsanitary conditions. As a result of these inspections, a total of 839,801 pounds of suspicious food products were detained for further follow up; of these, 791,331 pounds were voluntarily destroyed by the firms' representatives. Additionally, the team identified and permitted 149 businesses operating in violation of Chapter 500, Florida Statutes.

The SI Team was a key participant in ensuring that potentially contaminated food products were removed from the store shelves. Inspections conducted led to several recalls of products such as tomato and cilantro that were found to be contaminated with *Salmonella*. A trace-back and trace-forward investigation, conducted jointly with the FDA resulted in total voluntary recall and destruction of 720,000 pounds of potentially contaminated tomatoes. In response to

requests for assistance from the FDA with national product recalls and effectiveness audits, personnel from the Division of Food Safety continued to be very effective. In a joint effort with FDA, the SI Team was able to stop the sale of adulterated dietary supplements containing thiomethisosildenafil, an analog of sildenafil, the active ingredient of an FDA-approved drug used for Erectile Dysfunction (ED). As a result, product was voluntarily recalled and destroyed. During inspections the SI team identified imported white cheese in domestic commerce that was contaminated with E. coli, Salmonella and Staphylococcus aureus, resulting in a Class I recall and a total destruction of 7,853 pounds of cheese. Owners of one of these firms were subsequently arrested by the FDA Office of Criminal Investigations for violating a hold order.



The SI Team has worked closely with the National Oceanic and Atmospheric Administration (NOAA), the FDACS Bureau of Weights and Measures, and the FDACS Food Safety HACCP Team on several cases involving a seafood wholesaler who was misbranding and misrepresenting imported seafood products for country of origin, method of production, and declaration of weight. These products (15,992 pounds of shrimp and 1,300 pounds of salmon) were identified and placed under stop sale and released to NOAA. A seizure was issued and criminal charges are pending in federal court. The SI Team provided assistance with investigations that deal with consumer fraud as was the case this year when a local market was found to be substituting grouper with a less expensive, imported swai fish; administrative action was taken against this firm.

Another seafood incident was referred to the SI Team by the HACCP Team when they encountered imported fresh crabmeat entering commerce and being frozen to extend the shelf life. As a result of this, a total of 41,920 pounds of various crabmeat products were voluntarily destroyed by firm management, thereby avoiding the introduction of product potentially contaminated with *Clostridium botulinum* into domestic commerce.

Working with USDA/APHIS Smuggling Interdiction and Trade Compliance, the SI Team identified several meat products entering illegally into the United States. The case was turned over to Customs and Border Protection.

This year the SI Team received additional training in specialized processing methods

such as low acid canned foods, acidified foods, manufacturing plant inspections, Juice HACCP, Seafood HACCP Inspections, aseptic and environmental sampling, and National Incident Management Systems (NIMS). The team is an active participant in the state's Regional Domestic Security Task Force and the division's Rapid Response Team which is an all-hazards team created to provide complete response and recovery to adverse incidents involving food and/ or feed. The SI Team is committed to be on-call and available 24 hours a day, seven days a week to respond and travel to an incident that would impact the state of Florida.

During fiscal year 2009-2010, the Department tested 62 samples for nutritional label claims, resulting in seven warning letters for nutritional labeling violations. Appropriate fines were assessed for non-compliance with the law. In addition, the Department issued notice-of-violation letters, adverse findings letters, and defect action level letters to address such issues as excess fat in ground beef; undeclared allergens; high bacterial plate counts in various ready-toeat (RTE) foods such as sandwiches, salads, cheese, sprouts, sushi and produce; species adulteration; and general labeling deficiencies. As a result of the division's efforts on specific nutritional claims such as "low carbohydrate," "low fat," "no trans fat," "low sugar," "low salt," etc., many food processors have changed their label or their formulation to comply with labeling requirements. In other situations, products have been voluntarily removed from the Florida marketplace for failure to comply with accurate nutritional labeling criteria.

During fiscal year 2009-2010, the division started reviewing "electronic samples." These are digital images of samples and sample packaging. These samples are emailed to the laboratory, logged in through chain of custody like a physical sample, and a label review is performed. The cost benefit of this is obvious, as inspectors no longer need to ship samples to the laboratory that are only receiving a label review. A total of 114 samples were reviewed in this manner during fiscal year 2009-2010, with 88 receiving notice of violations due to misbranding.

The Division of Food Safety is an active participant in the FDA Voluntary National Retail Food Regulatory Program Standards, and the FDA Manufacturing Food Regulatory Program Standards. Both Standards are designed to serve as a guide to food programs managers in the design and management of a high-quality regulatory program based on best practice principles. Achieving conformance with the Standards requires constant self-assessment and a will to continue improving and creating innovative methods to achieve an excellent food protection program. The Bureau of Food and Meat Inspection received a first audit of the manufacturing standards this spring and received a favorable rating regarding its progress toward meeting all 10 standards.

The Technical Development and Review Section is made up of an administrator, a staff assistant, and two teams: Training and Standardization, and Hazard Analysis Team. Training and Standardization consists of eight FDA-certified inspection officers. The team standardizes field personnel, and develops, implements, trains, and evaluates field staff and programs. Other respon-

sibilities include: addressing the Certified Food Protection Managers Certification requirements, reviewing and revising food program rules, conducting plan reviews, and developing field personnel manuals. This year the Training and Standardization Team completed a follow-up to the 2004 Foodborne Illness Risk Factor baseline survey, which showed a greater than 20 percent improvement for out-of-compliance values in all retail food categories. This group also standardized 116 field inspection staff in the Food and Drug Administration Standardization and Certification Process, which is based on the Center for Disease Control risk factors.

The division continues to be actively involved in the ongoing training and implementation of HACCP programs in the food industry. HACCP is an internationally recognized, science-based, systematic, preventive, process control program to assure the production of safe food. It complements existing sanitation and good manufacturing practices by preventing, eliminating, or reducing hazards that may occur during any stage of the food production or handling process. Federal and state food regulations require both seafood and juice processors to evaluate their foodhandling processes and to develop and follow a HACCP plan if a critical control point is identified in their process. During the 2009-2010 fiscal year, 734 verification HACCP inspections were conducted for the bureau's various HACCP programs. HAC-CP verification inspections included highrisk products (such as seafood, sprouts, and juice) and specialized processes (such as preserving food by acidification, smoking, curing, and other similar methods).

The Hazard Analysis Team consists of five members located around the state who are trained in high-risk specialized processing methods. The team develops programs and guidance documents to assist industry in complying with various food safety regulations and provides vital training to field personnel regarding high-risk foods. This fiscal year, members of the HACCP team received FDA training in acidified foods, low acid canned foods, dietary supplements, juice HACCP, and seafood HACCP. All team members completed the train-thetrainer course in seafood HACCP and the FDA online curriculum required in Standard 2 of the FDA manufacturing program standards. The team continued to work closely with FDA and other regulatory agencies. One team member worked with FDA on an ICS exercise with the FDA Mobile Lab and import pesticide sampling from Port Everglades.

HACCP team members continued to serve as subject matter experts to the Rapid Response Team (RRT). The HACCP team attended RRT-related training in which all members completed ICS 100-400 training and two team members attended EPI ready training. In addition to receiving training, the HACCP team worked to actively provide training to field staff. Members of the team provided hands-on environmental swabbing and aseptic sampling training. The team presented 1.5 days of retail and manufacturing HACCP instruction to the field Senior Sanitation Specialists, and the HACCP team leader assisted FDA with the FDA Seafood regulators course given to 33 participants from the bureau, including three HACCP team members. Team members also attended the Association of Food and Drug Officials (AFDO) annual conference, the

International Association of Food Protection (IAFP) annual conference, and the Tomato Conference, helping the team to maintain and increase their scientific knowledge and build close relationships with other regulatory agencies, universities, and industry.

The division continues an active intraagency partnership with the Department's Agricultural Interdiction Stations. Cooperation between the Division of Food Safety and Agricultural Law Enforcement has resulted in enhancement of the safety of food through continuous monitoring and rapid response to problems associated with the transportation of foods throughout the farm-to-table food continuum at every road portal into Florida. Through coordinated activities, thousands of pounds of potentially unsafe food have been destroyed and prevented from entering Florida's food supply, or the vehicles have been sealed and sent back to their state of origin. Communications with the regulatory authorities in other states allow food safety professionals of regulatory agencies in neighboring states to meet such returned vehicles and supervise the destruction of the products and take appropriate regulatory action against the shipping firm.

The division is actively involved with the Florida Food Safety and Food Defense Advisory Council, which was created to serve as a forum for presenting, investigating, and evaluating issues relevant to the safety and security of the state's food supply and brings together diverse partners to address common food safety and food defense issues of concern to the citizens of Florida. Recent concerns have focused on small farmer concerns, food defense and preparation throughout the "farm to fork" continuum

in the event a food or farm emergency is realized. Other issues have ranged from foodborne illness outbreaks to technical advances in accurate and rapid identification of fish to prevent misrepresentation and overpricing to consumers.

The substitution of higher-priced, wildcaught fish with less expensive farm-raised fish continues to be a major concern. The farm-raised fish are quite inexpensive when compared to fish such as grouper or snapper, but the fillets are similar in appearance. This price differential creates a potential for large-scale misbranding of seafood. Advances in technology have enabled the Division of Food Safety to confirm the true identity of some of these seafood items. Testing of imported grouper and snapper for confirmation of species has disclosed misbranded lots. With the help of other state and federal agencies, academia, and industry, the division continues to develop tests and procedures to ensure that the consuming public receives wholesome, safe, and properly identified seafood. When misbranding is verified, the product is placed under stop-sale order and is removed from the marketplace.

In fiscal year 2009-2010, the Department processed and issued over 9,260 Certificates of Free Sale. These documents are provided for food products that are used for human consumption and exported to other countries. Businesses receiving such documents must be permitted by the Department and have a current satisfactory sanitation rating. Three hundred thirty businesses received service for shipment of U.S. originated food products to some 60 different foreign countries.

The Department oversees bottled water

plants, bulk water vendors, self-vending water machines, and self-vended ice units. The Department coordinates with other agencies to ensure all drinking water processed in Florida continues to meet the federal and state Safe Drinking Water Acts. The Department also works closely with the Bottled Water Association on an international level since bottled water is imported from various countries and the imported water must meet all applicable drinking water standards. Additionally, there are over 2,885 self-vending water machines at convenient locations throughout the state. They offer another source of safe and convenient drinking water to Florida's residents and visitors. The Department uniquely identifies and tracks each machine to make sure it is properly inspected and sampled at established intervals. Self-vending ice units are a new addition to the food industry in Florida. These units are self-contained modular buildings that produce, store, bag, and vend ice to consumers. The Department has been actively involved in evaluating the design, construction, and sanitation procedures to confirm compliance of the units with all sanitation code requirements. In fiscal year 2009-2010, the Food Safety Laboratory tested a total of 817 vended and bottled water samples, 15 of which were positive for coliforms. Likewise, the lab tested 538 samples of ice, 31 of which were positive.

In September 2008, the Division of Food Safety was awarded a Cooperative Agreement from the U.S. Food and Drug Administration (FDA) to develop an infrastructure that would facilitate a rapid response capability to address an adverse food/feed event. Only six states across the nation were selected as the first states to pilot this

venture. The agreement consists of \$1.5 million over a three-year period. The division is responsible for coordinating efforts with various state agencies to develop a cohesive network to activate a complete response and recovery to adverse incidents involving food and/or feed. The division is working closely with the FDA District Office in Florida, and employees of both agencies are being given extra training so they can work seamlessly together and function as one unit without duplicating efforts. Additionally, the division works closely with other divisions within the Department, such as the Division of Agricultural Environmental Services, the Division of Fruit and Vegetables, and the Office of Agricultural Emergency Preparedness.

In division efforts to develop a rapid response capability, it is necessary to enhance the current information management systems. This was initiated in 2010 and Phase I of the redesign efforts is complete and Phase II is scheduled to commence in August 2010. Completion of this project should require two additional years. Also, during this reporting period, joint training was conducted with federal and state food safety partners in such areas as: upper level Incident Command and Food Vulnerability, as well as an epidemiological course geared toward rapid response. Additionally, all Rapid Response Team members and many of the division's field staff have been attending Agro-terrorism courses offered throughout the state. Recently members of the Rapid Response Steering Committee met to develop a Food/Feed Emergency Response Plan to incorporate into the State of Florida's Emergency Response Plan. The finalization of this plan will ensure Florida is ready to offer an efficient and timely response to any food/feed incident in the state.

In order to respond as quickly as possible with needed supplies, the Division of Food Safety, in conjunction with the Department's Division of Forestry, has utilized storage space on Forestry locations situated throughout the state. Food Safety has refrigerators / freezers for sampling and shipment media and storage cabinets with needed gear to respond to any adverse incident.

In addition, as part of a cooperative agreement, the division has enrolled in FDA's Manufactured Food Regulatory Program Standards (MFRPS), a program of excellence that covers all manufactured foods in the state. In May 2010, FDA completed an audit of the MFRPS in which it was determined that the division currently meets five of the 10 standards and the division has created an improvement plan that will eventually allow achievement of the additional five standards once the plan is fully implemented.

Marketplace survey food samples are taken routinely during the inspection process or if violation of state or federal standards is suspected. Additionally, food inspectors have increased sample surveillance of foods manufactured within the state. In fiscal year 2009-2010, the division's field inspection staff collected 6,195 samples that were sent to the Department's Bureau of Food Laboratories for testing and analysis. As a result of laboratory findings, the division has initiated nationwide and statewide recalls of adulterated or contaminated food products. The marketplace and manufactured foods survey sample program is just one more



level of consumer protection that the Division of Food Safety offers to Floridians.

At the request of the tomato industry, the Department, with input from the University of Florida IFAS extension and the tomato industry, promulgated the nation's first regulation relating to safe handling practices of tomatoes at the farm and packinghouse. The Division of Food Safety and the Division of Fruit and Vegetables will continue to be working in a cooperative effort to implement and enforce this regulation to enhance the safety of tomatoes in the state.

On April 22, 2010, the Deepwater Horizon oil drilling rig sank off the coast of Louisiana, precipitating an unprecedented disaster due to the resulting spill. The effects of this event are still being felt, and will continue to be so for the foreseeable future. The division has been actively developing and implementing protocols, along with its state and federal partners, to ensure that Florida Gulf seafood that enters the marketplace is safe. Several members of the division are on both the Gulf State and Florida Fish Consumption Advisory workgroups. Our inspectors are working in concert with FDA on visiting firms that are primary processors of seafood from the Gulf of Mexico to ensure the potential hazard of environmental contaminants is properly assessed in their seafood HACCP plans. The ongoing response to this disaster will no doubt continue to encompass large amounts of time and resources in the coming years.

Chemical Residue Laboratories

One of the Department's major missions is to protect the public by monitoring fruits, vegetables, seafood, honey, and other foods for the presence of unsafe residues of pesticides, antibiotics, and other chemicals. The Department is also responsible for the enforcement of authorized tolerances. The Bureau of Chemical Residue Laboratories analyzes food items for the presence of potential chemical contaminants.

Food samples are collected from farms, packinghouses, processing facilities, and elsewhere in the distribution chain. All foods grown in Florida, and those brought into the state to be offered for sale, are subject to unannounced collection and analytical testing to assure adherence to the standards for allowable levels of pesticide or other chemicals, freedom from contamination or illegally used chemicals, and proper representation in labeling. The Department also provides pesticide residue data to federal agencies for use in making dietary risk assessments and for other purposes. During fiscal year 2009-2010, the Department's Chemical Residue Laboratories conducted some 527,168 different determinations for residues of specifically targeted pesticides and other chemicals on 3,442 food product samples.

Pesticide Residues

A primary focus of the Chemical Residue program is the analysis of pesticide residues in fresh fruits and vegetables. The Department's regulatory program is one of the most comprehensive monitoring and enforcement programs in the nation and provides the residents of Florida with valuable information concerning the safety of the food supply. In addition to assuring the proper use of pesticides by Florida growers, a thorough testing program enhances the status of Florida-grown produce in nation-wide and international markets.

Florida is an important producer of fresh fruits and vegetables for the nation. Samples are selected for regulatory surveillance based on several factors. An emphasis is put on Florida-grown commodities. Statistics on Florida-grown produce, as well as national consumption patterns and previous history of pesticide residue findings, are used to develop sampling plans that will target products most likely to contain illegal residues.

During the past year, the Department conducted surveys of tomato, strawberry, pepper, cabbage, cucumber, potato, corn, watermelon, squash, avocado, cantaloupe, eggplant, blueberry, radish and green bean producers early in the growing seasons in order to assure proper pesticide use. In support of Florida-grown citrus, 100 samples were analyzed, including 46 oranges, 38 grapefruit, 13 tangerines, and three tangelos. An additional 31 citrus samples from other states and countries were also analyzed, including seven oranges, four lemons, 14 limes, three tangerines, and three tangelos. Grapefruit are exported to

Japan and growers must meet strict pesticide regulations. Data provided by the Department can help provide assurance of the safety of Florida produce and aid its acceptance into foreign markets.

During fiscal year 2009-2010, the Chemical Residue Laboratories analyzed 1,767 fresh fruit and vegetable samples, one consumer complaint and one law enforcement request for pesticide residues in its regulatory surveillance and monitoring program. Products sampled in the regulatory program were produced in Florida (869 or 49.2percent) or 23 other U.S. states (315, or 17.8 percent), or were imported foods from 25 different countries destined for Florida markets (570, or 32.3 percent) or were from unknown origin (13 or 0.7 percent). Pesticide residue violations in fresh fruits and vegetables led to 19 incidents of food adulteration in fiscal year 2009-2010. Whenever possible, field personnel traced back product to its origin and took additional samples. Of the fresh fruits and vegetables analyzed in this regulatory surveillance program, 1.08 percent (19 of 1,767) exceeded established tolerance levels or contained pesticides not approved for use on a commodity. However, in imported produce tested, 2.46 percent (14 of 570) was identified with illegal residues, while in U.S. produce only 0.42 percent (5 of 1,184) was in violation. By agreement with the FDA, Florida's pesticide surveillance focus is on domestic products while the FDA targets imports. A strong FDA partnership with Florida provides information and resources needed to prevent violative product from being distributed.

More than 175 pesticides are screened in the regulatory program. Pesticides of particular interest in Florida crops or new

registrations are routinely added to the Department's analytical capability. The Department continues to support Florida's citrus industry by continually expanding its pesticide analysis screen to include agrichemicals with special use exemptions as well as those of particular interest for citrus export. The Department also focused on enforcement of pesticide crisis exemptions that were granted to Florida growers.

The Department continues to be active in the USDA Pesticide Data Program (PDP), an internationally recognized program that focuses on providing comprehensive data on pesticide residues for the purpose of risk assessment. Under contract with the USDA, 1,673 additional samples of cantaloupe, mangoes, oranges, sweet potatoes, and spinach were analyzed as a part of this program, which targets very low part-perbillion levels of pesticides in commodities most frequently consumed by infants and children. Samples include both domestic and imported products. Commodities and sampling sites are chosen to statistically represent the product available for consumption throughout the United States.

Food Laboratories

The Bureau of Food Laboratories uses chemical, microbiological, molecular, and physical methods to analyze foods processed or sold in Florida. These analyses help to ensure a safe and wholesome food supply by verifying the absence of adulterants, especially microbial food pathogens and food allergens, by verifying conformance with standards of safety and quality, and by ensuring accurate representation in labeling and nutritional claims. Emphasis is placed on current and emerging food safety

issues, such as microbiological contamination, unapproved food components, filth, chemical and heavy-metal contaminants, new food and food packaging technology, dietary supplements and other label and nutritional claims, and natural toxicants. The Bureau of Food Laboratories is also a national leader in preparations to respond in the event of a terrorist incident or emergency event involving the food supply.

Testing of food products using molecular methods, especially nucleic acid analyses based on the polymerase chain reaction (PCR), continued expansion during the year and now includes testing for *Escherichia coli* O157:H7, Listeria, and Salmonella. Molecular methods for analysis of *Vibrio parahaemolyticus* and *Vibrio cholerae* in shell-fish are undergoing validation or verification. Testing for specific toxin-producing genes in *E. coli* continued for the USDA Microbiological Data Program (MDP).

DNA fingerprinting, or pulsed field gel electrophoresis (PFGE), is being performed by the Food Laboratories for quality assurance, as well as for typing when specific organisms such as *Listeria monocytogenes* or Salmonella are recovered from a food product. The patterns produced by the PFGE are submitted for inclusion in the national PulseNet database. This data can then be used by epidemiologists in search of the causative agent for outbreaks. The staff is certified in PFGE by the Centers for Disease Control and Prevention (CDC).

Food Analyses

During fiscal year 2009-2010, the Department performed 43,763 analyses on 9,566 samples. The majority of samples (6,195)

were received under Division of Food Safety or other Department regulatory inspection programs. In addition, 2,801 samples were received from the joint state and USDA Microbiological Data Program and 570 were other special samples. Out of 6,195 regulatory samples, 5,663 samples, representing 91.4 percent of state program samples, were found to be in compliance with all applicable food safety requirements. A summary of regulatory pathogen analyses results is shown below:

Summary of Regulatory Pathogen Analyses

Organism	Adulterated Samples
Listeria monocytogene	es19 of 1,867
Salmonella	14 of 1,946
E. coli (generic)	79 of 1,799
E. coli O157:H7	0 of 541
Staphylococcus aureu	s17 of 1,563

Food safety issues remain a major emphasis of the analytical program. With the continued identification of foodborne illness outbreaks, increased monitoring for pathogens in ready-to-eat food is necessary. Microbiological pathogen analyses focused on Salmonella, Listeria monocytogenes, Staphylococcus aureus, E. coli O157:H7, and generic E. coli. Targeted products for these analyses included ready-to-eat produce, processed meats, fresh cut vegetables, sprouts, prepared salads, cheese, smoked fish, spices, and sandwiches. As a result of past outbreaks, the Department continues to monitor fresh-squeezed citrus juices. Additionally, analyses of bottled and vended water and ice for adulteration by either microbiological or chemical contaminants represented a significant component of state surveillance programs.

Summary of Water/Ice Analyses (Microbiological)

Sample Type	Adulterate	d/Misbranded
Vended and Bottle	ed Water	15 of 817
Ice		31 of 538

In its 10th year, the USDA Microbiological Data Program (MDP), which is designed to determine the frequency that potential pathogens are detected in fresh produce, required state laboratories in Florida, Colorado, Michigan, Minnesota, New York, Ohio, Washington, and Wisconsin laboratories to systematically monitor fresh produce commodities by testing for Salmonella, pathogenic E. coli (STEC/ETEC), and E. coli O157:H7. This year the Department analyzed 2,801 samples for MDP. Commodities tested in 2009-2010 include peanut butter, cantaloupe, lettuce (loose and bagged), spinach, hot peppers, cilantro, green onions, sprouts, and round and Roma tomatoes. Further expansion of this program, in types of organisms, commodities tested, numbers of samples, and technology used is expected.

In August 2002, the Bureau of Food Laboratories was certified by the FDA for microbiological testing of shellfish in support of the National Shellfish Sanitation Program (NSSP). The laboratory was re-inspected in spring of 2007 and is maintaining competency for this certification.

Other areas of emphasis in public health and consumer protection include monitoring lime and lemon juices, honey, syrups, and vanilla for fraudulent formulations or adulteration; ground meats for fat claims and species identification (e.g., ground beef, ground chicken, and ground pork); candy

for lead; candy, sodas, and bakery products for artificial colors; and dried fruits and vegetables for undeclared sulfites. Bakery products are also monitored for insect filth and rodent contamination, as well as the validity of nutritional claims. Cornmeal, grits, and peanut butter are monitored for aflatoxin. Dietary supplements continue to be monitored for the presence of ephedra alkaloids. Unsafe or misrepresented products are removed from sale by the Bureau of Food and Meat Inspection.

Florida's fresh seafood is monitored by the Department in response to concerns regarding species substitution, decomposition (histamine in scromboid species and indole in shrimp), and safe levels of mercury. Fish tested by the Department include tuna, grouper, mahi-mahi, red snapper, salmon, swordfish, mackerel, blue marlin, amberjack, and catfish. An updated DNAsequencing method for species authentication based on an FDA method is in use. Fish tested for species verification included snapper (including red snapper, yellowtail snapper, mangrove snapper, vermillion snapper, scarlet snapper, and Pacific lane snapper), grouper (including red grouper and black grouper), and salmon.

The Department continues its extensive surveillance of products making nutritional claims such as "low carbohydrate" and "fat free." Products making "sugar free" claims have been under particular scrutiny due to their potential impact on diabetics and other consumers. Monitoring of undeclared food allergens continues with particular focus on milk, egg, and peanut allergens. With the passing of the Federal Food Allergen Labeling and Consumer Protection Act, the Department continues to ensure appropriate

and understandable food allergen labeling. The Department has extensively surveyed the market for accuracy in trans-fat declarations, as well as correctness in labeling.

The Molecular Laboratory also modified and tested food-sample preparation methods for the national Food Emergency Response Network (FERN) protocols for real-time PCR and conventional PCR detection for certain pathogens on food samples.

ISO 17025 Accreditation

On May 21, 2007, both laboratory bureaus attained American Association for Laboratory Accreditation (A2LA) accreditation to the ISO/IEC 17025 standard, General Requirements for the Competence of Testing and Calibration Laboratories, for the specific tests listed in certificates 2534.01, 2534.02, and 2534.03. On May 14, 2009, A2LA renewed the accreditation of both laboratories following a rigorous five-day onsite audit by A2LA assessors. Renewal of accreditation is required every two years and ensures that the laboratories continuously implement and improve their policies, procedures, and testing activities. The ISO/IEC 17025 standard is recognized internationally as the standard for assessing the quality and competence of analytical testing activities.

Accreditation to this standard provides the Department with international credibility, showing that analytical data produced by the two bureaus meets rigorous standards for quality and laboratory competence.

This accomplishment came after a lengthy, intense process of developing and implementing policies and procedures governing virtually all aspects of laboratory operations, a process that required the dedication of

ANNUAL REPORT 2009 / 2010

ENSURING A SAFE, WHOLESOME FOOD SUPPLY

considerable resources, a high level of commitment by all laboratory staff, and the continued backing and support of senior management. Ongoing work includes auditing of the system and corrective and preventive actions for improvement, all combining to ensure the results generated by the laboratories meet the Department's needs.

Information Technology

The Food and Chemical Residue Laboratories, along with division staff, have been planning for a new Laboratory Information System. With this system, better integration of laboratory testing information, quality assurance parameters, and reporting is anticipated to be achieved using technology to move our laboratories into another level of quality and data integrity.

National Databases

Both the Food and Chemical Residue Laboratories continue to provide data to the FDA-supported eLEXNET national data system, which allows real-time exchange of information concerning potential or suspected food supply problems. Staff members use eLEXNET for reporting results for FERN projects. Data is exported from the laboratories database to the eLEXNET system.

Results from PFGE testing on contaminated food product bacterial isolates are being submitted into the national PulseNet database, to allow for comparison of food product isolates with patterns from human outbreaks.

An application was also developed which provides direct export of data collected for the Pesticide Data Program from the labora-

tories database to the PDP Oracle database in Washington, D.C.

Education and Training

Educational opportunities for laboratory personnel were emphasized in order to remain on the leading edge of science and technology. Department scientists have been active on several national committees and attended training workshops in order to update knowledge in the areas of analytical chemistry, microbiology, and new technologies. Staff members also participated as trainers for national training programs for FERN.



Responding to Food Emergencies and Terrorism

The Food and Chemical Residue Laboratories continue their initiatives to enhance capability to respond to a terrorism incident involving the food supply. Both laboratories are members of the FERN and participate in federal cooperative agreements both in microbiology and chemistry from the USDA and FDA to enhance capabilities and participate in national surveillance assignments. FERN was formed to respond specifically to national food emergencies and the threat of terrorism in foods. In addition to biological capabilities, the laboratories have expanded counter-terrorism capabilities to include testing foods for chemical agents. The FERN laboratories were activated in late June 2008 after the Salmonella outbreak associated with fresh produce continued even though warnings were put out for one commodity. Because of the activation, state and federal laboratories found a culprit in jalapeño peppers, and in addition, found other Salmonella contamination associated with imported produce. The Food Laboratory conducted testing to assure the safety of Florida tomatoes and to detect contaminated produce to ensure the safety of the food supply. In addition, Florida participated in analysis for ensuring the safety of peanut butter and peanut butter crackers after a contamination event involving peanuts contaminated with Salmonella.

The FERN laboratories were activated in May 2010 to respond to the oil spill in the Gulf of Mexico. The Chemical Residue Laboratory received new instrumentation which enabled them to validate methods and screen for polycyclic aromatic hydro-

carbons (PAHs) in seafood to help assure that toxic compounds related to the oil spill were not entering the food supply. In addition, in fiscal year 2009-2010, the laboratory significantly expanded its ability to screen for toxic compounds by adding hundreds of compounds to their organic screen by Liquid Chromotagraphy Time-of-Flight Mass Spectrometry and validating an analysis for organic mercury speciation.

The Division of Food Safety and the laboratories maintain strong partnerships with other state and federal agencies, including the Florida Department of Health (DOH), FDA, USDA, and the Centers for Disease Control (CDC). The Food Safety Laboratories, together with other state agencies, have developed a statewide laboratory response plan to assure a coordinated and effective response to emergencies. Representatives of the laboratories at FDACS and DOH meet quarterly to enhance the abilities of both agencies to respond in the event of an emergency.

The Food Laboratories have undergone inspections by the FDA, CDC, and USDA regarding their capability to safely handle and securely protect highly dangerous select agents and toxins, and the laboratories have satisfied all requirements. This has allowed FDACS to be one of the few state agricultural departments to have a food laboratory as a member of the national Laboratory Response Network (LRN) for public health protection. In 2009-2010, a member of the laboratory staff participated in an Operational Work Group for the LRN.

Accomplishments in this domestic/food security initiative include operation of an active Biosafety Level-3 laboratory, the ac-

quisition and use of sophisticated analytical equipment, and substantial ongoing training of staff in procedures for processing and analyzing samples suspected of containing terrorist threat agents. Staff attended training on FERN protocols at FDA and USDA laboratories, technical meetings with other laboratories, and workshops and teleconferences. Laboratory staff gave lectures and presentations on issues in domestic/food security at national conferences. Food Laboratories staff have been instructors at FERN workshops on real-time PCR as well as microbiological analysis for potential threat agents.

Both the Chemical Residue and Food Laboratories have areas for safe and secure preparation and analysis of foods for presence of hazardous chemical agents. Separate chemical extraction areas with chemical fume hoods for both organic and metals sample preparations are available. Laboratory space for eight instrument bays, equipped with overhead ventilation hoods, house gas and liquid mass spectrometers and other instrumentation, are dedicated to counterterrorism work in the Chemical Residue Laboratories, along with equipment for analysis of heavy metals in the Food Laboratories. Upgrades to computer capabilities and electricity, purified water, and analytical gas supplies have been added to support this new technology.

Through FERN cooperative agreements, both the Food and Chemical Residue Laboratories are performing extensive testing and verification of FERN methods and protocols to be used in the event of national food emergencies. Funds and instrumentation received under the cooperative agreements have enabled the laboratories

to develop complex microbiology and molecular analysis, as well as toxin screening techniques utilizing gas, liquid, and inductively coupled mass spectrophotometry. FERN methods have been developed and validated in several high-risk commodities. Instrument and method training for analysts, as well as participation in FERN surveillance exercises and proficiency check samples, has significantly improved the laboratories' ability to detect agents of concern in complicated food matrices. The collaborative contributions of these two state food laboratories to national food security exercises are making Florida a national leader in food safety and security. The laboratories participated in FDA or FERN counter-terrorism surveillance exercises and several FERN and LRN proficiencies during 2009-2010.



Division of Dairy Industry

The Department's Dairy Division ensures that dairy products purchased by Florida consumers are wholesome, produced under sanitary conditions, and correctly labeled. The division regulates the production, transportation, processing, distribution,

and labeling of milk and milk products. It establishes standards for these products, whether they originate in Florida or other states.

The division issues permits and conducts inspections for Florida dairy facilities. As of June 30, 2010, these facilities included:

139 dairy farms

- 19 milk processing plants
- 9 cheese plants
- 71 frozen dessert manufacturers
- 15 single-service milk container manufacturers
- 31 milk distribution depots
- 7 milk receiving, transfer, and wash stations
- 13 milk hauling services

In addition to its inspection program, the division collects and tests samples from dairy farms and processing plants for compliance with established product quality standards. These samples are collected by field inspectors and tested in a division laboratory for excessive bacteria and somatic cells and for the presence of antibiotics, added water, and other impurities.

The programs administered by the Division of Dairy Industry are part of a uniform national dairy sanitation program outlined in the Pasteurized Milk Ordinance (PMO) published by the FDA. Likewise, most of the dairy product quality standards enforced by the division are part of the PMO or the Code of Federal Regulations. As in all states, both the PMO and the relevant sections of the Code of Federal Regulation have been adopted in state statute or rule.

The fact that all states have adopted uniform regulations makes it possible to ship

dairy products from state to state with a minimum amount of interstate regulatory interference. The interstate shipment of dairy products is coordinated through the Interstate Milk Shippers (IMS) Conference, an organization that includes representation from FDA, the dairy producing and processing industry, and all state dairy regulatory agencies.

An IMS Rating Officer routinely performs surveys for the purpose of determining compliance with the PMO. In addition, the FDA will conduct periodic check ratings to determine if both the industry and state regulatory agency are in compliance with the requirements in the PMO. A state that fails its FDA inspection can be denied the right to ship Grade A milk across state lines. During fiscal year 2009-2010, IMS Rating Officers performed 10 plant surveys, seven single-service containers manufacturer audits, and seven farm group surveys, involving 88 dairy farm inspections. FDA conducted seven plant check ratings and five single-service container manufacturer audits.

The Florida Dairy Industry

Florida dairy farms are large, milking an average of about 825 cows each. In spite of the hot, humid climate, these cows average about 16,000 pounds of milk per year or about five gallons per day per cow. Even though the state's 115,000 dairy cows rank it first in the Southeast and 18th nationally, Florida still imports approximately 30 percent of its milk – and the proportion of imported milk is growing. Florida's 19 Grade A milk processors include four Dean Food plants, two Publix plants, one Winn-Dixie plant, and two plants owned by National Dairy Holdings Group, LP.

Dairy Inspections

The division's 12 field inspectors are stationed from Miami to Pensacola. They make regular visits to dairy farms and processing plants to inspect, consult, and collect samples. During the past year, dairy inspectors performed 1,599 inspections at dairy farms and plants in Florida. They also collected 7,232 samples of milk and milk products. They made 1,352 inspections of milk transport tankers and bulk milk haulers.

Monitoring Antibiotics in Milk

The industry has established a rigorous program to monitor milk for contamination with residues of antibiotics commonly used to treat cows on dairy farms. During the 2009-2010 fiscal year, 56,348 transport tankers, representing more that 2.6 billion pounds of milk, were checked for antibiotics in Florida. Only three (one in 18,782) of these tankers, were found to contain traces of antibiotics; all three loads were dumped. Nationally, about one in 3,846 tankers of milk is found to have antibiotic contamination. These statistics show that Florida dairymen do an exceptional job of preventing antibiotic residues in their milk.

Division of Aquaculture

Florida has the most diverse number and type of animals and plants in production and production systems of any state in the country and ranks seventh in overall farm-gate sales. Floridians have also been aquacultural innovators dating back to the establishment of the first alligator farm in 1893, the planting of dried oyster cultch to

support oyster farming in 1889, the shipping of farm-raised tropical fish and aquatic plants from Miami by railroad during the 1920s, experimental hard-clam farming in 1958, and the first global air shipment of tropical fish in the mid-1960s.

Innovation continues today with researchand-development farms that are proving the feasibility of culturing microalgae for biofuels; state-of-the-art, indoor production systems producing sturgeon meat and caviar; ornamental fish farms culturing the



only commercially sold transgenic animal in the United States; and, urban roof-top hydroponic farms that offer fresh vegetables, herbs, and fish to appreciative local markets.

The Division of Aquaculture was created in 1999 by the Florida Legislature and is responsible for implementing the provisions of Chapter 597, F.S., through six programs: aquaculture certification, leasing of sovereignty submerged land for aquacultural purposes, shellfish resource development, shellfish processing plant certification, shellfish harvesting area management, and tech-

nical support. The Act also provides for an advisory council to the Commissioner of Agriculture, the Aquaculture Review Council, and a state agency council to resolve aquacultural issues. Information about the division's programs is available at www. FloridaAquaculture.com.

Aquaculture Certification Program

An Aquaculture Certificate of Registration was established by law to recognize the culture of aquatic species (fish, plants, reptiles, mollusks, and crustaceans). Aquaculture facilities are required to be certified annually and to attest that they will comply with Aquaculture Best Management Practices provided in Chapter 5L-3, Florida Administrative Code. The Aquaculture Certificate of Registration is used to identify aquaculture producers as members of Florida's agricultural community and to identify aquacultural products produced in the state. Aquaculture Best Management Practices encompass farm location, design, animal and plant species, operation, and management to achieve Florida's environmental conservation and preservation goals. Farm inspections are conducted to ensure compliance with the Aquaculture Best Management Practices and the responsibilities assumed by the farmer when accepting the Aquaculture Certificate of Registration.

The division certified 870 aquaculture facilities and completed 1,051 farm inspections during fiscal year 2009-2010. Thirty-nine percent of certified farms produce shellfish, 25 percent produce ornamental fish and plants, and 22 percent produce food fish, with the remainder producing live rock, alligators, and bait. Certified farms are found in 62 of the state's 67 counties, with the

highest number of certified farms occurring in Levy County (18 percent). Hillsborough County is next with 15 percent, followed by Brevard, Dade, Dixie, Franklin, Indian River, Lee, Polk, and Volusia counties with 4 percent each.

Sovereignty Submerged Lands Leasing Program

The division is responsible for the Aquaculture Lease Program under the provisions in Chapter 253, F.S. Currently, the Department administers 531 aquaculture leases containing about 1,436 acres and 65 shellfish leases containing about 1,146 acres. Aquaculture leases are located in Brevard, Charlotte, Collier, Dixie, Franklin, Indian River, Lee, Levy, Manatee, Monroe, Palm Beach, Pinellas, St. Johns, and Volusia counties.

In response to its statutory mandate, the division identifies tracts of submerged lands throughout the state that are suitable for aquacultural development. Twenty-one Aquaculture Use Areas have been identified by the Department and authorized by the Governor and Cabinet in nine coastal counties: Brevard, Charlotte, Collier, Dixie, Franklin, Indian River, Lee, Levy, and Volusia.

Oyster Culture and Shellfish Resource Development Program

Under the mandate that began in 1913 to improve, enlarge, and conserve the oyster and clam resources of the state, the division is actively engaged in enhancing shellfish resources and restoring oyster reefs on public submerged lands. During fiscal year 2009-2010, the division collected 174,072 bushels of processed oyster shell from pro-

cessors in Franklin County, 45,912 bushels of processed clam shell from processors in Levy County, and 65,136 bushels of fossilized shell from a quarry in Franklin County. And the division purchased a new, 130-footlong, flat-deck barge, christened "Oyster Hog" by local middle school students, to carry out oyster reef creation or restoration in estuarine waters throughout the Florida Panhandle.

Oyster resource development projects are conducted on an annual basis in cooperation with local oystermen's associations. During fiscal year 2009-2010, a total of 68,640 bushels of live oysters were replanted on public reefs in Franklin and Wakulla counties.



Restoring Public Oyster Reefs

The division is involved in a comprehensive multi-county project to restore oyster reefs that were damaged by recent hurricanes. During fiscal year 2009-2010, 512,736 bushels of fossilized or processed shell were deposited on public oyster reefs. The division also contracted for the deposition

of 28,800 bushels of processed oyster shell on public oyster reefs located in shallow inshore waters. This project is designed to enhance oyster production, facilitate recovery of the oyster business, and provide significant resource restoration benefits. The project promotes the development of self-sustaining reef communities, which, in turn, perform ecological services that contribute to fisheries habitat, ecosystem stability, nutrient cycling, and improved water quality. Functioning oyster reefs are recognized as an essential component in stabilizing and sustaining ecological relationships in almost all Gulf estuarine ecosystems.

Shellfish Harvesting Area Classification and **Management Program**

This program seeks to classify and manage Florida coastal waters for maximum use of shellfish resource, protection of public health, and promotion of a healthy coastal environment. The program is audited each year by the U.S. Food and Drug Administration to ensure compliance with the provisions of the National Shellfish Sanitation Program.

A total of 39 shellfish harvesting areas are currently classified and managed statewide. During fiscal year 2009-2010, the required annual update reports and triennial reappraisal reports were completed for all 39 shellfish harvesting areas. The data and reports support current classification and management for all shellfish harvesting areas. During fiscal year 2009-2010, a total of 719 sampling excursions were conducted to collect and analyze 14,337 water samples for fecal coliform bacteria. There were 500 closures and re-openings of shellfish harvesting areas. Shellfish harvesting area

maps and their harvest status (open or closed) are posted on the division's web site.

Shellfish Processing Facility Program

This program seeks to ensure wholesome shellfish products through inspection, education, and enforcement of state regulations and national guidelines. The program is audited by the U.S. Food and Drug Administration to ensure compliance with the provisions of the National Shellfish



Sanitation Program. A total of 104 Shellfish Processing Plant Certifications were issued during fiscal year 2009-2010. A total of 428 regulatory processing plant inspections were conducted. Based on fiscal year 2009-2010 inspection results, 50 warning letters and five settlement agreement letters were issued. Action was taken to destroy shellfish products when they were found to be adulterated, contaminated, unwholesome, mislabeled, or exceeding the product shelf life.

The division assists Florida oyster processors in developing and implementing post-harvest processing (PHP) technologies to reduce human health risks associated with naturally occurring Vibrio bacteria in shell-stock oysters. Phased cooling of summer harvested oysters significantly reduces health risks. During fiscal year 2009-2010, the division carried out 60 time/temperature validation studies to confirm that PHP technologies being used by shellfish processors were meeting temperature reduction goals within stated time limits.

BP Deepwater Horizon Oil Spill

The division participated in several federal, state, and shellfish harvester and farmer oil spill response committees to coordinate information and response as well as communicating information about seafood safety, oil presence/absence, and regulatory changes. Shellfish (oyster and clam) samples were collected for chemical analysis of oil and the by-productions in advance of potential Shellfish Harvest Areas oiling from the BP Deepwater Horizon oil spill to create a database of background concentrations. Oyster harvesting hours were extended and winter oyster reefs were opened to harvest to allow harvesters and processors to earn income that might have been otherwise lost if those areas were closed because of oil.

Technical Support Programs

The division provides substantial technical and administrative support for a variety of initiatives to support aquaculture development and conserve Florida's natural resources:

ANNUAL REPORT 2009 / 2010

ENSURING A SAFE, WHOLESOME FOOD SUPPLY

- Creating or revising Aquaculture Best Management Practices through the formation of technical advisory committees composed of producer, agency, extension, and environmental representatives that write initial drafts that are then subject to the public administrative rule development process.
- Completing theoretical and applied research to create and release sterile invasive species (e.g., tilapia and apple snail) that will lead to population collapse in natural systems.
- Operating and maintaining a network of coastal water quality sensors located in proximity to aquaculture leases that report to a web page real-time water temperature, salinity, dissolved oxygen, turbidity, tidal amplitude, barometric pressure, air temperature, and wind speed and direction. Data can be viewed at http://sondes.floridaaquaculture.com/sondes/sonde_cedarkeygulfjackson.htm.
- Supporting the Statewide Clam Industry
 Task Force that addresses issues of interest
 to Gulf and Atlantic coast clam farmers.
- Distributed \$341, 806 in feed stimulus grant funds that were a component of the 2009 American Recovery and Reinvestment Act to 23 farms that documented feed costs that were at least 25 percent higher than the previous five years.
- Administering industry development project grants to provide answers for production, technical, or economic challenges that are recommended by the Aquaculture Review Council to the Commissioner of Agriculture for funding through legislative appropriations.

- Organizing and conducting workshops, seminars, and problem-solving activities to resolve environmental issues or provide information to Florida farmers.
- Producing the Florida Aquaculture Plan in concert with the Aquaculture Review Council as a planning document to coordinate the efforts of state agencies, the public and private research community, the Legislature, and other interested parties.
- Producing "Florida Aquaculture," a quarterly newsletter for all certified aquaculturists, shellfish processing houses, and other interested parties to communicate timely technical information, state and federal regulatory updates, grants-and-aids programs, or event announcements.
- Producing technical bulletins to provide in-depth information on topics like red tide, red tide regulations, cultured hard clam handling and harvesting, shellfish net coatings, aquatic preserves, apple snails, hurricane preparedness, shellfish harvest area management, and Interstate Shellfish Sanitation Conference.
- Aquaculture Review Council projects, environmental analyses, the Florida Aquaculture Plan, "Florida Aquaculture" newsletter, and technical bulletins are posted to the division's web site, and free copies are available by contacting the division at (850) 488-4033.



Division of Agricultural Environmental Services

The Division of Agricultural Environmental Services has the distinction of being responsible for the largest number of statutory programs in the Department, including the diverse areas of pesticide regulation, mosquito control, structural pest control, and regulation of commercial feed, seed, and fertilizer. The division is responsible for the implementation and enforcement of Chapters 388, 482, 487, 576, 578 and 580, Florida Statutes. The execution of the division's responsibilities is accomplished through four functional bureaus to ensure consumer safety, environmental protection, and agronomic product stewardship.

Bureau of Agricultural Environmental Laboratories

The Bureau of Agricultural and Environmental Laboratories is a partner in the division's regulatory enforcement activities. The bureau's laboratories conduct chemical. physical, and biological analyses of commercial feed, agricultural, vegetable, and flower seed, commercial fertilizer, agricultural liming materials, and pesticide formulations sold in the state to assure compliance with label guarantees for all active ingredients, nutrients, components, and properties. The bureau also conducts analyses of water, soil, air, swab, vegetation, and other investigative/environmental samples for pesticide in support of pesticide misuse investigations and groundwater monitoring projects. Bureau accomplishments in fiscal year 2009-2010 follow.

Realignment of Laboratory Operations

To enhance the utilization of the division's laboratory resources, the division's feed, seed, fertilizer, and pesticide laboratories were consolidated into one functional unit: the Bureau of Agricultural Environmental Laboratories. This merger has resulted in cost savings and efficiencies through resource sharing and the ability to cross-train laboratory staff across the varied program areas. The realignment has also afforded a more thorough and versatile technical response to the division's ever-expanding analytical needs. The establishment of a bureau-wide Quality Assurance/Quality Control (QA/QC) unit provides for centralized and consistent oversight of all laboratory sections. This centralization will also allow the laboratory to more easily migrate as a whole unit towards achieving ISO 17025 accreditation. Additional efficiencies have also been realized in budgeting, purchasing, and data reporting through a bureau-wide administrative unit.

Pesticide Laboratory Air Monitoring Developments

In cooperation with the Bureau of Pesticides and the Bureau of Compliance Monitoring and in support of the EPA/IFAS Good Neighbor Practices and Schools grant, the Pesticide Laboratory participated in the planning phase of two air sampling events being designed to mimic potential drift of pesticides to neighboring sites such as schools or daycare facilities. The data collected from these sampling events will be used by the division and its constituents to educate growers about the potential for drift

to occur from pesticide applications and enhance communication between growers and neighboring schools. The Bureau of Agricultural and Environmental Laboratories continues development of its air analysis program to provide analytical support capabilities to respond to evolving regulatory enforcement needs from the division's pesticide programs. Recent methods development work has provided encouraging results with the use of new air sampling technologies.

Instrumentation and Analysis Enhancements

The primary goal of the Bureau of Agricultural and Environmental Laboratories is to utilize the latest technologies to maximize analytical capabilities and reduce costs through the use of automation. To achieve this, the bureau has incorporated an autoblock digestion instrument that provides an economical way to prepare samples for metals analysis yielding benefits in both efficiency and safety. Pesticide screening capabilities increased by 18 percent during fiscal year 2009-2010 as 19 new active ingredients were added to the screening methodology. The fertilizer section's "Instrument Throughput and Efficiency Team" earned a Davis Productivity Award by maximizing the use of an Inductively Coupled Plasma rapid auto sampler to improve sample throughput and reduce analysis costs. In the feed section, Real Time-Polymerase Chain Reaction (RT-PCR) has been used to detect prohibited material in animal feeds that have the potential to transmit Bovine Spongiform Encephalopathy (BSE). This highly specific and complimentary technology to traditional PCR also serves to automate the detection process allowing

for sample analysis rates in one fourth of the time. The Bureau plans to continue to pursue advanced technology to maximize efficiency and analytical capabilities.

Additional Program Information

Feed Samples
Fertilizer Samples
Seed Samples
Commercial Seed Samples125
Pesticide Formulation Samples 44 Pesticide Formulation Samples
Determinations
Samples
Total Pesticide Samples
Percent Illegal Pesticide Samples

Bureau of Compliance Monitoring

The Bureau of Compliance Monitoring has statutory oversight and regulatory authority over the distribution of feed, seed, fertilizer, and pesticides in Florida. The bureau ensures that the more than 3,000 distributors of feed, seed, and fertilizer products in Florida are registered or licensed and that their products meet current regulatory standards and label guarantees. Applicators of restricted-use pesticides are certified through the program, and pesticide application and agricultural worker safety standards are monitored through routine inspections and by investigation of complaints received by the bureau.

The Commercial Feed Program is responsible for assuring that the commercial feed supply meets safety and nutrient content standards through registration of feed manufacturers and distributors, directed inspection of feed products, and supervision of certified laboratory analyses on a variety of feed products sold or produced in the state. The Seed Program ensures that Florida's consumers have a source of pure, high-quality seed that meets or exceeds all state and federal standards. The bureau's Fertilizer Regulatory Program stands out as one of the most innovative and progressive regulatory programs in the country, ensuring that Florida farmers and consumers receive quality fertilizers for all their growing needs.

Through the Pesticide Compliance and Pesticide Certification and Licensing sections, the bureau regulates the distribution and use of over 14,000 registered pesticide brands by licensing and inspection of restricted-use pesticide applicators and

dealers, and by routine inspection of farms, nurseries, golf courses, and similar sites. Compliance with the agricultural workers standard is regulated through inspections, responses to complaints, and active outreach and training of agricultural employers in the standard.

Re-registration Eligibility Decisions (RED) for Soil Fumigant Pesticides

In May 2009, the U.S. Environmental Protection Agency (EPA) issued Amended Re-registration Eligibility Decisions (RED) for soil fumigant pesticides. As a result, soil fumigants containing methyl bromide, chloropicrin, metam sodium/potassium, methyl isothiocyanate and/or dazomet have been targeted for major label revisions between 2010 and 2011. The changes will have a significant impact on industry and state regulatory programs. In preparation for these changes the Pesticide Compliance Section, in conjunction with the EPA, hosted a Soil Fumigant Pesticide Inspector Residential Training (PIRT) for inspectors from agencies across the United States. It was the first training of this kind, with the objective of providing information on the implementation of RED mitigation measures for soil fumigants and providing tools and training for conducting thorough fumigant use inspections. In addition, the bureau is working in partnership with the University of Florida's Institute of Food and Agricultural Sciences to develop further fumigant training for inspectors and applicators.

Aldicarb Use and Registration

In fiscal year 2009-2010, the Department issued permits for aldicarb applications at 5,146 sites in Florida, including 536,236

acres of citrus, 38,351 acres of potatoes, 31,616 acres of peanuts, 12,823 acres of cotton, and 280 acres of soybeans. The Pesticide Use Permitting database system (PUPS) allows the Department to monitor and authorize application of certain highrisk pesticides in Florida. Currently, the system is only used to permit application sites for restricted-use pesticides containing aldicarb. The soil type and well location must be identified for each application site before permits are issued. The Department will continue to track the use of aldicarb in Florida to ensure protection of groundwater from contamination with aldicarb residues until all uses are phased out in 2018, as required by the U.S. Environmental Protection Agency; however, the PUPS system will be maintained for tracking other high-risk pesticides if the need arises.

Risk-based Inspections

In 2009-2010 the Bureau of Compliance Monitoring implemented a "risked-based" approach to regulatory inspections. This strategy encompassed all program areas to enhance compliance and better utilize resources. Risk assessments were developed based on the threats to three primary considerations: economic, environmental, and public health. Regulatory activities are based on the evaluation of a licensee's current compliance history, and inspections conducted accordingly. Licensees with a questionable to poor compliance record are targeted for increased regulatory oversight, while those with acceptable to excellent standing with the Department receive fewer inspections.

National Pollutant Discharge Elimination System (NPDES) program The Bureau of Compliance Monitoring provided education and outreach to management personnel of fertilizer facilities in regard to the National Pollutant Discharge Elimination System (NPDES) program. This program requires regulated facilities to obtain NPDES stormwater permits with the Florida Department of Environmental Protection (DEP) and to implement pollution prevention practices. Such facilities include establishments involved in the mixing or blending of fertilizers and establishments engaged in manufacturing nitrogenous or phosphate fertilizer materials, where fertilizer discharge could potentially cause a groundwater concern. The bureau's field staff distributed NPDES brochures to bulk fertilizer plants engaged in NPDES Activities and actively observed fertilizer plants' Best Management Practices.

Worker Protection and Farm Safety

In an outreach and education initiative to farm-worker communities, the bureau initiated the formation of a work group to teach farm workers basic pesticide safety and how to protect their families from exposure. The work group brought together growers, farm-worker organizations, and government entities with the common goal of providing safe work environments for farm workers.

Additional Data

Pesticide Certification

Pesticide Applicator Licenses Issued or	
Renewed2	,751
Pesticide Dealer Licenses Issued or	
Renewed	367
Pesticide Training Programs Approved to	o C
Issue Continuing Education Units (CEUs)
1	183

Pesticide Compliance

Total Pesticide Inspections2,161
Worker Protection Standard (WPS)
Inspections Conducted 1,172
(111 of these inspections identified viola-
tions of the WPS)
Complaints, Tips, and/or Allegations
Investigated233
Enforcement Actions Issued 268
Fines Assessed\$33,475

Bureau of Pesticides

The Bureau of Pesticides is responsible for registering pesticides that are sold or distributed in Florida, for conducting risk assessments for pesticides, and for developing risk-mitigation measures for pesticides. These activities are conducted by the bureau's Pesticide Registration Section and the Scientific Evaluation Section.

Pesticides and Application Techniques to Fight Citrus Pests

The Bureau of Pesticides played a key role in coordinating with Florida's citrus industry, researchers, other state agencies, the U.S. Environmental Protection Agency (EPA), and pesticide companies to clear the way for new pesticides and more efficient use of existing pesticides to combat two serious plant diseases, citrus greening and citrus canker. Under the Department's lead regulatory oversight, five applications for special local need (SLN) registrations were reviewed, refined, and ultimately accepted by the EPA to allow low-volume pesticide application by ground and aircraft to control the insect vector that spreads citrus greening. The citrus industry anticipates that these SLNs will markedly increase efficiency and effectiveness in the control

of citrus greening, yielding growers annual savings of \$25 million to \$30 million. The bureau also assisted the citrus industry in the review and issuance of two critical new registrations of products for control of citrus leafminer, an insect whose feeding behavior is believed to make trees more susceptible to citrus canker. One of the products disperses a pheromone scent that interferes with the mating behavior of leafminers.

Clean Water Act Permitting Requirements

When a federal court decision mandated National Pollution Discharge Elimination System (NPDES) permits for pesticide applications to, over, or near water, the Department promptly took action to meet the court's requirements while minimizing impacts on pesticide operations in Florida. FDACS joined with the Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission to guide the permit development process on two fronts: (1) on the federal level, the Florida agencies provided key input to assist the EPA Office of Water in developing general permit requirements that reflected the practical realities of diverse pesticide operations in Florida; and, (2) at the state level, FDACS and sister agencies developed concepts for practical state-specific permit requirements and coordination of implementation. Throughout this process, FDACS consulted with potentially affected pesticide user groups such as growers, mosquito control operators, and aquatic weed control operators to ensure that the permit development process addressed their unique situations.

Mosquito Control Traps to Control Dengue Fever

Dengue is a mosquito-spread viral disease that can cause fever, headaches, joint pain, and rashes. Florida-acquired Dengue was eliminated in 1934, but last year 24 cases of Dengue were detected in Key West. Despite aggressive vector control efforts by the Florida Keys Mosquito Control District (FKMCD), new cases continue to develop. After a company developed a new pesticide trap that targets the female mosquito during the critical egg-laying life stage, FDACS coordinated with the company, the FKMCD, the EPA, and the U.S. Navy to expedite the issuance of state Experimental Use Permit to test the trap in Key West. The prompt collaborative review process enabled thousands of the traps to be deployed for testing to determine if this product will prove useful in the fight against mosquitoes that can carry Dengue.

Registration Fees for Pesticide Regulatory Programs

Challenging economic conditions have lessened the availability of general revenue funding for state regulatory programs. In anticipation of this trend, FDACS consulted with industry and, effective in 2008, the Florida Legislature raised annual pesticide registration fees from \$250 to \$350 per brand (\$700 biennially). In fiscal year 2009-2010, the Department implemented a supplemental registration fee of \$315 (\$630 biennially) per brand for any pesticide containing an active ingredient for which a food tolerance has been established. The supplemental fees replenished funding to counter cuts in general revenue support for pesticide testing programs by the Division

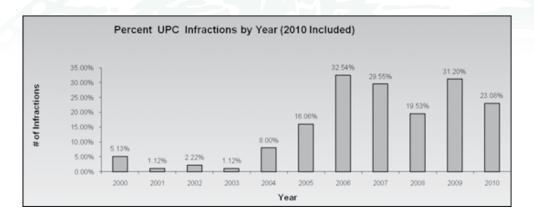
of Food Safety. Collectively, these increases in fees have enabled the uninterrupted operation of pesticide regulatory programs despite deep cuts in general revenue funding.

Pesticide Brand Registrations

Pesticide brands are registered on a biennial basis in Florida. Fiscal year 2008-2009 was the first year of the two-year registration cycle. During that year, 15,287 brands were registered (most of these were registration renewals). In fiscal year 2009-2010, the second year of the two-year cycle, an additional 1,623 pesticide brands were registered. The total number of pesticide products registered during the two-year cycle was 16,910 products. In fiscal year 2009-2010, 92.7 percent of pesticide ingredients evaluated and/or managed were in compliance with regulations.

Entomology and Pest Control

The Bureau of Entomology and Pest Control protects consumers' health and welfare through the regulation of structural pest control and mosquito control in Florida. One of its major accomplishments over the past several years is the emphasis on unlicensed pest control in the state. The bureau's Enforcement Section has concentrated its efforts on pursuing unlicensed (illegal) pest control operators who are not in compliance with Chapter 482, F.S., the Structural Pest Control Law. The following graph indicates a steady rise in the total number of actions taken against unlicensed pest control operators. Through these efforts, consumers in Florida are protected against unscrupulous and illegal pest control operators and those companies and in-



dividuals practicing pest control in the state are in compliance with the law.

Concentrating its enforcement efforts on protecting at-risk populations from unscrupulous pest control operators, the bureau conducted two statewide enforcement operations (SEO), with the objective of obtaining data relative to the use of pesticides in childcare centers, schools, nursing homes, and assisted living facilities. The SEOs indicated that pest control conducted in the state is being performed by licensed pest control companies and is accomplished in compliance of the law.

With help from the division's IT Section, the bureau instituted an online application process to assist the regulated industries in complying with statutory requirements. One such requirement includes the need to notify the Department of a structural fumigation 24 hours prior to the fumigation. This online application for notification simplified the notification process for the regulated industry, made the process more reliable, and provided the Department with a more efficient means of performing its regulatory responsibilities. Additional IT applications include the development of a program that assists the mosquito control industry with filing for state funding and a bureau-wide effort to electronically archive

its licensing and administrative case files for easy information access.

Additional Data

Pest Control Inspections	2,561
Pest Control Complaints Received/	
Investigated	563
Commercial Pest Control Business	
Licenses Issued	3,752
Identification Cardholders	. 28,383
Certified Operators	6,653
Special Identification Cardholders	190
Limited Certification (Govt./Private)	471
Limited Certification (Commercial	
Landscape)	1,990
Pest Control Examinations	
Administered	1,794

Division of Forestry Forestry Programs

Wildfires

Throughout the 2009-2010 fiscal year, there were 2,151 wildfires compared to 3,240 wildfires during the 2008-2009 fiscal year. The number of acres burned was 60,793 less than in the previous year. Florida has a 12-month fire season, with increased activity from January through June, and peak

activity in the spring and early summer. The spring of 2010 was wetter than normal. but large amounts of frost-killed vegetation from the winter months led to increased fire activity for the first part of spring. The number of human-caused fires was down from 2,709 in the 2008-2009 fiscal year to 1,621 during the 2009-2010 fiscal year. The decline in human-caused fires can be attributed to improving rainfall amounts and the implementation of the Division of Forestry's (DOF) aggressive fire prevention program. During the fourth quarter (April-June), 56 percent of wildfires were caused by lightning. This period is usually the most active part of Florida's year-round fire season. The top two fire causes from April to June were lightning, with 376 starts, followed by debris burning, with 152 starts. The annual number of arson fires decreased from 477 in 2008-2009 to 306 in 2009-2010.

During the 2009-2010 fiscal year, the Forest Protection Bureau continued to dispatch resources to assist with all hazard incidents. The largest group of resources sent this year was to assist with Medfly eradication in South Florida. During the course of the incident DOF sent 131 overhead resources and 71 pieces of equipment. The most publicized story this year was the Deepwater Horizon oil spill. DOF sent six individuals to the Florida Emergency Operations Center to assist for a two-week period. Additionally, DOF sent qualified personnel to Mobile, Alabama, and provided an aircraft and pilots to help with reconnaissance flights along the coast of Florida's Panhandle. Resources are available for further deployment if a need should arise.

Forest Protection

DOF personnel made 7,686 media contacts during this fiscal year. Although wildfire activity was low, local Wildfire Mitigation Specialists took advantage of opportunities to increase public awareness about simple methods residents could use around their homes and in their communities to lower wildfire risk. Messages focused on the personal responsibility that each wildland urban interface area resident had to increase the probability that their home could survive a wildfire disaster even if fire service personnel could not get to them in time.

Firewise workshop activities completed during the past fiscal year proved successful. Florida saw 44 new communities begin the process to become nationally recognized as a Firewise Community/USA. Each of these communities began the process of developing local plans that would help lower the wildfire risk of their communities. Eight communities completed the process and achieved recognition as a Firewise Community/USA. Wildfire Mitigation Specialists and other local personnel provided technical support and encouragement to these communities. Another 8,490 residents received information about reducing wildfire risk through the 368 local workshops and presentations provided by DOF. To assist homeowners with the selection of plants that have low flammability for use around their homes, a statewide list which rated the flammability of the most common plants in use was developed and distributed.

Thirty-six Community Wildfire Protection Plans (CWPP) were initiated during this fiscal year. The CWPP planning process brings together DOF, local fire service

representatives, local elected officials, and homeowners to develop a realistic assessment of community wildfire risks and strategies to lower those risks. As a planning document, the CWPP becomes the basic background information for the application for various federal funding including FEMA hazard mitigation grants. The CWPP also can be used to update the Local Mitigation Strategy (LMS).

The following is a summary of the accomplishments of the Wildfire Mitigation Specialists during fiscal year 2009-2010:

Total Media Contacts	7,686
Radio Contacts	1,823
TV Contacts	2,183
Newspaper Contacts	2,617
Web-based Contacts	
Media Releases Distributed	183
Homes Visited Door to Door	1,077
Presentations and Local Workshop	368
Workshop Participants	8,490
Arson Alert Signs Posted and Cards	
Distributed	382
Brochures/Flyers Distributed	36,597
Home and Community Wildfire Risk	
Assessments Completed	179

Information about DOF, wildfire, and Firewise was delivered to students through a school newspaper project contracted through Newspapers in Education. Students in grades two through six in 31 of Florida's highest wildfire risk counties received the 225,000 newspapers directly in their schools. The project was enhanced by providing teacher lesson plans and other enrichment materials for classroom use.

Local Centers/Districts and the four regional fire management teams worked on 217 fuel

reduction projects throughout the state during this fiscal year. These projects used prescribed fire and mechanical methods to reduce the hazardous fuel load on over 32,000 acres statewide. These projects directly contributed to wildfire risk reduction for over 12,000 homes valued at over \$2.6 billion. The cost for these projects was approximately \$730,000, which is less than \$61 per home.

Due to the prediction of a less-active fire season, the movie and billboard advertising campaign was not implemented this year. Several fire prevention billboards are still up from last year, resulting in over \$84,000 in free advertising.

The centers/districts' 15 mobile billboards were used throughout the state during months with high fire danger. Each billboard has several interchangeable messages: Smokey Bear and his message "Only You Can Prevent Wildfires," "Think Before You Burn," "Woods Arson is Not a Victimless Crime," and a prescribed burning message.

The "Target Arson" Campaign that was developed a few years ago was again utilized this past year. Several thousand hunting targets and license holders with an arson message and the Arson Alert Hotline number were distributed to gun ranges and stores that sell hunting licenses and equipment.

The National Smokey Bear Awards are presented annually by the National Association of State Foresters, the U.S. Department of Agriculture's Forest Service, and the Ad Council. Ten Bronze Smokey Awards can be presented nationally each year to recog-



nize outstanding fire prevention efforts that have an impact statewide. This year, Florida received one of the awards given. The award was for the "What Was I Thinking" outdoor recreation campaign developed by the Everglades District.

Results from the first-ever in-depth wildfire prevention study conducted by the U.S. Forest Service Research Station in North Carolina using data from DOF's wildfire prevention and mitigation program were published in two scientific journals and widely distributed via other media. The study concluded that if Florida were able to double its efforts in wildfire prevention education, the number of wildfires could be expected to decrease by about 800 a year and save homeowners and commercial landowners an estimated \$11 million in property damage.

The Florida Wildfire Prevention CD and teacher's guide were updated and converted to an online program through grant funding, making it more accessible to teachers and students.

Despite a wet winter, prescribed burning acreage was the highest ever in fiscal year 2009-2010. During the year, DOF authorized prescribed burns on just over 2.7 million acres. This is a 17 percent increase in the acreage authorized in fiscal year 2008-2009 and nearly 30 percent higher than the 10-year average of 2.1 million acres. Prescribed burning is an important land management tool in Florida. It increases forest health, improves wildlife habitat, and reduces the risk and severity of wildfires.

DOF administered the Volunteer Fire Assistance (VFA) Grant Program to volunteer fire departments that serve rural communities. Approximately \$346,544 was awarded to 73 fire departments. This was a 50 percent matching grant fund, which enabled the fire departments to purchase approximately \$693,087 worth of equipment, communication devices, fire engine parts, hoses, nozzles, and firefighter protective gear. There are currently 55 fire department-approved VFA grants that will pay out \$224,234 when completed. DOF also assisted six fire departments in successfully applying for U.S. Department of Interior 90/10 grants. When completed they should be worth \$79,416.

DOF also screened over \$11.7 million in federal excess property in support of the fire program. A good portion of that equipment was in the form of military trucks that were provided to rural fire departments. The majority of the 61 trucks and 18 trailers that were provided were 6x6, 2.5-ton military trucks with automatic transmissions and super single tires. There were also 10 6,000-gallon tankers. Fire departments convert these units to brush engines to assist DOF with wildfire suppression. There were 74 generators distributed for emergen-

cy response. DOF has more than 500 units on lease to various rural community fire protection agencies throughout the state. Without the assistance from rural volunteer fire departments, the wildfire problems in Florida would be much more severe.

There have been 1,285 trainees that have taken part in the one day Certified Pile Burner program since it started in October 2006. During this past year DOF held 14 classes across the state, with two more planned before the end of 2010. All of the comments concerning the training have been very positive. Of the participants, 628 have successfully completed the certification procedure and obtained their Certified Pile Burner numbers.

The American Recovery and Reinvestment Act (Recovery Act) was signed by President Obama on February 17, 2009. The Recovery Act provides a wide range of public benefits including \$250 million to the U.S. Forest Service nationally for state and private forestry activities. These activities include hazardous fuels reduction, forest health, and ecosystem improvement. Through a competitive grant process, DOF was awarded two grants. On March 11, 2009, DOF was awarded \$900,000 through the Recovery Act for the project titled "Florida Community's Fuels Management Program, Phase One." The program provided funding for DOF to conduct prescribed burning and other hazardous-fuel reduction activities such as roller chopping, mowing, and mulching to minimize the impact of wildfires. Community information and education projects conducted were targeted at Florida residents living in and within close proximity to high-wildfire-risk areas. On July 1, 2009, DOF was awarded \$6,281,000

through the Recovery Act for the project titled "Florida Community's Fuels Management Program, Phase Two." Phase two will allow DOF to set up three hazardous-fuels burn teams to augment current hazardousfuels management activities; contract for hazardous-fuel reduction through mechanical and prescribed burning; and contract for the delivery of "Firewise" programs to local homeowner and civic groups to increase the delivery of this wildland fire educational tool. DOF will also contract for the development of Community Wildfire Protection Plans (CWPP) to improve homeowner planning for the protection of their local community. Necessary equipment will be purchased through the grant by DOF for the hazardous fuel reduction projects to be completed by both the burn teams and the local field units.

During the 2009-2010 fiscal year, all of the funding through Phase One was expended and implementation of Phase Two was 40 percent complete. Listed below are some of the accomplishments for Phase One and Two.

Number of Hazardous Fuel Reduction
Projects:304
Number of Acres Mitigated: 50,304
Number of Structures Protected: 16,676
Value of Structures Protected:
\$3,416,062,180
Number of Prevention and Education
Programs Conducted: 601
Number of Firewise Programs
Conducted: 8
Number of CWPPs Implemented: 1

Land Acquisition

Land acquisition closings through the DOF Florida Forever program, Additions and Inholdings for the fiscal year 2009-2010 totaled 3,409.8 acres at a value of \$8,752,090. A total of 10,885.01 acres were added to the State Forest system during the year under Florida's Conservation Land Acquisition Program. All of these lands are managed to provide as many compatible uses and benefits to the public as possible while still providing protection for threatened or endangered species of plants and animals.



The Rural and Family Lands Protection Program (RFLPP) is a land acquisition program designed to acquire perpetual easements over working agricultural lands (preference to ranch and timber lands) to ensure natural resource protection and the continued economic viability of agricultural activities on those lands. The program was created in 2001, but was not appropriated funding until 2008. The amount was 3.5 percent of the annual Florida Forever appropriation or \$10.5 million in 2008 for the purchase of perpetual conservation easements. An approved acquisition list of 35

projects is in place and being worked on by the section. On July 28, 2009, the Board of Trustees approved the RFLPP inaugural conservation easement, Evans Ranch. The total purchase price for the 690 acres was \$2,749,650 (50/50 partnership with the Board of Trustees and the St. Johns River Water Management District each paying \$1,374,825). Subsequently, the Board has approved easements for Adams Ranch, 782.8 acres at \$1,603,510, and Smith Farms, 343.12 acres at \$1,655,554.

As lead agency, DOF is responsible for administering the Federal Forest Legacy Program, whose purpose is to protect environmentally important forest areas that are threatened by conversion to non-forest uses and, through the use of voluntary conservation easements and fee simple purchases, to promote forestland protection and other conservation opportunities. During fiscal year 2009-2010 one application was submitted and approved by the national panel. The St. Vincent/St. Joe project is currently in the appraisal phase of acquisition. In fiscal year 2010-2011 one application has been submitted and approved by the national ranking panel. The approved project is named the Timucuan Preserve Expansion and is located in Duval County. DOF is working with the Trust for Public land and Duval County to acquire this tract.

The Land Acquisition Section is responsible for coordinating land management planning for all 35 forests through the Acquisition Restoration Council (ARC) and to the Board of Trustees. Additionally, the unit is slated to perform 35 land management reviews on various state-managed conservation/recreation properties in fiscal year 2010-2011.



Natural Resource Management

DOF manages natural resources by providing technical and financial assistance to private landowners and communities, and by operating programs on State Forests and other state lands. DOF employs multiple-use principles to ensure a sustained healthy forest for 1,054,745 acres on 35 State Forests. The most current scientific knowledge is used to ensure good stewardship and appropriate silviculture practices. All of these lands are managed to provide as many compatible uses and benefits to the public as possible while still providing protection for threatened or endangered species of plants and animals. Public recreational opportunities on these lands include fishing, hunting, hiking, picnicking, canoeing, camping, swimming, bird watching, bicycling, and the riding of off-highway vehicles (OHVs) and horses. Approximately 1,231,261 visitors participated in these activities during the year. During the 2009-2010 fiscal year, the management of State Forests generated revenues of \$7,059,960. This revenue is derived from timber sales, miscellaneous forest products sales, and recreation fees.

State Forest revenues generated in fiscal year 2009-2010 were in the following specific categories:

State Forest Timber Sales	\$5,462,058
Miscellaneous Products*	\$ 416,773
Other Public Lands (DOF Sh	are) \$ 146,029
Recreation	\$1,181,129
	\$7,205,989

(*Miscellaneous Products revenue categories include cabbage palms, palmetto fronds, pine straw, apiaries, grazing, fuel wood, crooked wood, grove leases, etc.)

In fiscal year 2009-2010, 3,382 acres of reforestation was completed on State Forests. DOF supports other state agencies with the Other Public Lands (OPL) Program. In fiscal year 2009-2010, the OPL Program generated \$254,002 in timber revenue for other government agencies that include the Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, Water Management Districts, Department of Corrections, and various counties and municipalities. In addition, the OPL Program gave valuable advice to other state agencies on how to successfully restore forested uplands and increase the value of the state's timber asset.

Andrews Tree Nursery

DOF's Andrews Nursery produced and sold 5.3 million bare-root pine seedlings and 3.5 million containerized pine and wiregrass seedlings to 686 customers, which generated more than \$865,000 in revenue.

Pine cone collections at DOF's seed orchards at Blackwater River State Forest and Withlacoochee State Forest, along with



open collections around the state, were very productive during the fall of 2009. DOF added 5,142 pounds of longleaf, slash, loblolly, and sand pine to the seed inventory. New longleaf pine collections from Twin Rivers and Jennings State Forests and the Avon Park Air Force Range, along with existing seed from Withlacoochee and Blackwater State Forests, give DOF a wide variety of longleaf genetic options to be used in seedling production.

Andrews Nursery is involved in several projects funded through the American Recovery and Reinvestment Act (ARRA) program, utilizing with Regional Longleaf Pine Restoration Initiative and Fuel Reduction grant funds. At the nursery itself, construction is under way on two new suspension fields, which will provide space for the production of an additional 800,000 containerized longleaf pine seedlings and an additional 400,000 containerized seedlings of wiregrass and other native understory plants. Nursery staff is also involved in ARRA projects designed to enhance the diversity of longleaf pine seed collected as well as develop areas from which seed of native understory species can be collected and used to establish healthy understory on deficient sites.

Technical Assistance

DOF provides technical assistance to help private landowners and communities make intelligent management decisions to develop and achieve their objectives on forestlands.

The Forest Stewardship Program, part of a national initiative that encourages private forest landowners to manage their property for multiple uses, provided 140 Forest Stewardship Plans on 42,000 acres. Fiftythree landowner properties were certified as Stewardship Forests. Overall, County Foresters provided 2,110 assists to landowners on 254,504 acres under the program this year. In addition to Forest Stewardship Plans, DOF Foresters provided 4,256 forest management planning assists to landowners on more than 365,321 acres. Forestry education workshops were presented to more than 1,036 adults and nearly 8,000 youths.



During the fiscal year, the Southern Pine Beetle Prevention Cost-Share Program approved a total of \$955,000 for 417 landowners to conduct thinning and prescribed burning treatments to reduce the risk of loss to the southern pine beetle.

DOF awarded \$245,593 in federal Urban and Community Forestry grants to a total of 24 non-profit organizations, local governments, and educational institutions to enhance their ability to carry out effective urban forest management programs in their respective communities.

DOF also provided technical assistance support to landowners in cooperation with other USDA agencies, including the Conservation Reserve Program (CRP). During the past year, DOF Foresters have provided 365 landowner assists on 14,790 acres of private non-industrial forest lands under the CRP program. Additionally, the 2008 Farm Bill has provided expanded opportunities for incentive payments to private non-industrial forest landowners under the Environmental Quality Enhancement Program (EQIP). In Florida to date, 37 landowners have been approved for \$750,000 that the Florida Natural Resources Conservation Service (NRCS) set aside specifically for forestry practices under EQIP. In addition, 21 landowners have been approved for forestry-related practices under the General EQIP signup for \$552,360. DOF Foresters provided 242 assists to landowners on 19,277 acres under this program during the past year.

Forest Health

Non-native invasive pest plants continue to be a serious and growing threat to Florida's forest resources. Federal funds (\$200,000 annually) are divided among several State Forests and the multi-agency Central Florida Lygodium Strategy in strategic support of management activities. This past year also saw the continuation of a federally funded (\$400,000) two-phase initiative directed at cogongrass treatments in northern Florida: 1) cost-share assistance to private non-industrial landowners and 2) direct assistance to county road/public works departments. In its first two years, the cost-share program has received applications from 158 eligible private landowners to treat more than 846 acres of cogongrass. and 12 county road departments have been enrolled in the assistance program. Cooperative efforts continue with the University of Florida's School of Forest Resources and Conservation (e.g., development of agespecific forest health educational materials for public schools and/or Future Farmers of America programs, and assessments of oak diseases and urban tree decay). Monitoring of laurel wilt disease in redbay populations and annosum root disease in partially harvested pine stands continues.

Forest Inventory and Utilization

In cooperation with the USDA Forest Service, DOF implements the Forest Inventory and Analysis (FIA) Program by conducting annual forest timber inventory and other resource studies for all forestlands in Florida. The most recent FIA data are available on the U.S. Forest Service Southern Research Station web site. A fact sheet describing Florida forests based on the 2007 FIA data has also been developed, and a full analytical report will be published in 2010. In addition, DOF collected data on wood use in primary mills and the final report, "Florida's Timber Industry: An Assessment of Timber Product Output and Use, 2007," has been published. The forest utilization report is currently under review and should be published shortly. All three components of the FIA process - FIA plot data, TPO mill data, and utilization study - will allow for

an updated and complete picture of Florida timber resources and forest industry.

American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act (Recovery Act) was signed by President Obama on February 17, 2009. The Recovery Act provides a wide range of public benefits, including \$250 million to the U.S. Forest Service nationally for state and private forestry activities. These activities include hazardous-fuels reduction, forest health, and ecosystem improvements. Under the Regional Longleaf Pine Restoration Initiative and Fuel Reduction, DOF was awarded \$1,742,000 on August 27, 2009. Activities include: restoring longleaf pine on state-owned and private lands; increasing production capacity of longleaf pine seed, seedlings, and native understory plants; coordinating efforts across broad partnerships; and providing educational materials and training to the public and staff. Also under a separate Florida Forest Health Improvement Initiative application, DOF was awarded \$1.57 million on November 4, 2009. The goal is to improve the overall health of community forests. Funding will be used to provide grants to local governments, non-profit groups, and educational institutions. Approximately 60 percent of the available funds will be awarded for tree planting projects on public lands. The concepts of "Right Tree/Right Place" and "Going Native" will be emphasized. The remaining funds will be awarded for remedial pruning to improve the health of existing publicly owned trees, treatments such as soil aeration to improve tree stability and nutrient uptake, and a limited amount for removal of hazardous trees.

Field Operations

DOF's forestry programs are implemented by Field Operations staff located in the state's 15 field units and the Tallahassee state office. The field units are grouped into four regions, each under a Deputy Chief of Field Operations. The multifunctional workforce of personnel and equipment provides a responsive and comprehensive approach to land management and wildfire control statewide.



Hydrology

DOF is responsible for the development, implementation, and monitoring of Silviculture Best Management Practices (BMPs) that protect the state's water resources, and for implementing hydrologic and wetland restoration on State Forests.

Silviculture BMP training accounted for 38 workshops totaling 741 participants statewide to continually update landowners, loggers, and foresters on recent changes.

Voluntary silviculture BMP courtesy checks were performed on 29 individual landowners throughout Florida where bona-fide ongoing forestry operations have occurred.

The Silviculture BMP Implementation Survey was initiated in 1981 and has since been conducted biennially. The principal purpose of the survey is to determine the level of implementation (compliance) with Florida's Silviculture BMPs. The 2009 survey was conducted in 37 counties in North Florida on a random sample of recent forestry operations. Both public and private forestlands that meet the selection criteria are eligible for the survey. Considering all practices in all BMP categories, implementation in 2009 was 98.1 percent. The results of the 2011 implementation survey will be forthcoming during fiscal year 2010-2011.

Forestry Rule 5I-6 Florida Administrative Code (FAC) was established in 2004 as a voluntary program established to provide incentives for landowners to follow forestry BMPs during forestry operations. The Notice of Intent is a commitment to follow BMPs during all forestry operations, and has no fees or waiting period. The incentive is a presumption of compliance with state water-quality standards, where BMPs are applied. Since 2004 over 5.2 million acres of private and public land have been enrolled in the program.

With cooperation and assistance from other state and federal agencies, wetland restoration efforts continued on Florida's State Forests in fiscal year 2009-2010. During the past 12 months, five restoration projects were initiated and three completed, restoring approximately 20,969 acres of impaired wetland functions on three State Forests (Tate's Hell, Lake Wales Ridge, and Point Washington). Exotic plant (melaleuca) control treatment in the Regional Off-site Mitigation Area (ROMA) on the Picayune Strand

State Forest (PSSF) was completed in 2008 and is being monitored by the PSSF staff. Elsewhere, the DOF Hydrology Section continues its project effectiveness monitoring activities on 49 completed projects statewide.

Estimated cost for wetland restoration activities on State Forests during fiscal year 2009-2010 was \$143,350. Funding for the implementation of fiscal year 2009-2010 projects was provided through Florida Department of Transportation mitigation funding, federal grants, and the state's wetland mitigation program administered by DEP and the Water Management Districts. The DOF's share of all fiscal year 2009-2010 project costs was approximately \$2,000, primarily in the form of in-kind services, representing 1.4 percent of the total restoration expenditure for the fiscal year.

Since the initiation of the DOF's Wetland Restoration Program in 2000, 64 projects have been initiated on 20 State Forests. Forty-nine of these projects have been completed with projected ecological benefits on 118,869 wetland acres. Total expenditure for all wetland restoration projects on State Forests to date is approximately \$4,816,666, of which the DOF's share is \$528,949, or roughly 11 percent of the total.

Also in fiscal year 2009-2010, DOF completed Wetland Restoration Needs Assessments for four tracts on three State Forests, covering approximately 6,062 acres. Since the assessment program began in 2007, 33 assessments have identified almost 900 potential restoration project sites distributed over 200,000 acres in 33 forest tracts on 17 State Forests.

Forest Resource Planning and Support Services

Information Technology

The Forestry Information Technology (IT) section supports desktop personal computers, software applications, and Geographic Information Systems (GIS) throughout the state. IT also provides web page support for DOF staff as well as the general public. Related functions include: hardware and software acquisition, installation and maintenance; intranet and Internet web management; application development and maintenance; ongoing upgrades of computer networks; and spatial analyses. These activities are in support of land management, wildfire prevention, and management activities in DOF.

The Application Support group provides software support and maintenance, creates new applications, and performs ad hoc data retrieval. The group focused on the following projects: WebOBA (open burn authorizations), rare plants, champion trees, and mitigation. The WebOBA project is a web-based system allowing certified burners to submit OBA requests to Fire Management Information System (FMIS) Dispatch via the Internet; the requests are approved or denied by the appropriate field unit office. The rare plants project is an application tracking rare plants conservation efforts in Florida. There are two parts to the application. One part allows administration of data on the intranet and the second exposes searchable information to the general public on the Internet. The intranet portion was launched in July 2010 and the Internet search will be added to the Forestry web site during fiscal year 2010-2011. The champion trees project is an application that tracks and maintains champion trees data for Florida and any Florida-based national winners. This application is scheduled for implementation during spring of 2011. The web-based mitigation application will allow for input, tracking, and reporting of information by Mitigation Specialists. This application is also slated for deployment during spring-summer 2011. Fire Management Information System (FMIS) updates, Silviculture Best Management Practices (BMP) Survey, and Complex Incident Management Course (CIMC) Tracking were all completed successfully.

The web page management and support include three public Internet web sites and an intranet site. Visits to the public web sites exceed 1 million annually and the site is updated daily as new programs and events occur. New pages included information on the programs funded by the American Recovery and Reinvestment Act of 2009 (ARRA). A new page and survey was created for the woody biomass economic study. Information and updates for grant programs including control of southern pine beetles and invasive cogongrass, urban and community forestry, and bare-root tree seedlings were provided. A new program for a public photo contest was initiated and quarterly winners were posted. Internet ongoing support also includes responding to general e-mail requests and forwarding more detailed requests to the appropriate staff.

The GIS/GPS support group provided technical assistance, training, analysis, data development, mapping, and reporting. They

developed the Resource Information Management System (RMIS) state lands web mapping application, and provided a test system for customer feedback. Production deployment of RMIS is projected for fiscal year 2010-2011. They provided assistance to the Stewardship Program project mapping and tracking. GIS staff began the transition to the Southern Fire Risk Assessment System (SFRAS) software application. The transition is concurrent with risk assessment data updates such as muck soils, canopy characteristics, initial dispatch locations, and critical facilities. They provided wildland-urban interface and at-risk communities mapping.

DOF staff were surveyed for GIS training needs; the support group analyzed the data and provided follow-up information. Years of spatial data files were assessed and consolidated. Data file locations were standardized, and data was transferred to a centralized departmental storage area network (SAN). GIS staff provided mapping expertise to the Florida Division of Emergency Management (FDEM) during the Deepwater Horizon response. Staff assisted in the development of the Forest Resource Assessment and Forest Resource Strategy Reports as mandated by the 2008 Farm Bill. They provided ongoing support for wildland and prescribed burning mapping, Fire Management Information System (FMIS) mapping systems, and FMIS software upgrades.

The Desktop Support group provided a variety of continuing services and participated in several new projects. Included was the review of new technology, installation and repair of computers and printers, and

support of a variety of desktop computing devices. Technicians also supported and upgraded desktop software applications. During fiscal year 2009-2010, 142 new computers were deployed throughout DOF. Sixty-five of the new computers were procured to accommodate the new WildFire Suppression Resources Tracking System for Forest Area Supervisors (FAS). Sixty-five vehicle mounts were purchased and installed to accommodate the use of the new laptops in the FAS vehicles. Fiftyseven new computers were provided by the Department to replace aging computers; the Forest Resource Planning and Support Services Bureau purchased 20 new computers to enhance computing productivity in several areas. Thirty Dell Latitude D610 computers replaced by the new FAS computers were relocated to the Withlacoochee Training Center, providing laptops for training purposes. The remaining computers replaced by the tracking project were used to replace older Dell Latitude D800 computers and the D800s were sent to surplus. During 2009-2010, nearly 200 computers were deployed or relocated throughout the state. The project to upgrade DOF's Microsoft Office Suite from version 2003 to 2007 was implemented. The upgrade to Office 2007 continues as requests are made, failed hard drives are replaced, or new computers are deployed. The Desktop Support group has also encrypted the majority of DOF's laptop hard drives with McAfee's Endpoint Encryption as directed by Department policy. During the 2010-2011 fiscal year, the Desktop Support group will be introducing Microsoft's latest operating system, 64bit Windows 7 to DOF with 32 new desktop computers.

Planning

During fiscal year 2009-2010, the Bureau of Forest Resource Planning and Support Services' Planning Section compiled data for reporting DOF accomplishments related to legislatively approved performance measures, coordinated development of forestry field unit and bureau annual operational plans, submitted the long-range program plan as part of the legislative budget request, and conducted reviews of county comprehensive planning documents, utility siting applications, and clearinghouse projects on an ongoing basis.

The Planning Section administers the Florida Forestry Discovery Center, which is part of the Florida State Fair and receives over 30,000 visitors annually. The section also coordinates property inventory and insurance issues as well as the Time Allocation and Accomplishment Reporting System (TAARS).

Construction

The Construction Section provides complete project management for DOF's fixed capital outlay projects, including construction and maintenance programs statewide. During fiscal year 2009-2010, an estimated 26,000 square feet of building space was contracted to be constructed at a cost of approximately \$2.8 million. Projects consisted of three new Forestry Stations and numerous small projects in the way of pavilions, pole barns, equipment sheds, and additions to existing facilities. Included in the Construction Section's projects was the expenditure of over \$1 million in maintenance, repair, and small construction funding. Additionally, the last of the hurricane reconstruction projects from the 2004 and 2005 hurricanes is in process, with the Arcadia Forestry Station completely rebuilt and the Belle Glade Forestry Site and Sebring Forestry Station under construction. These new facilities improve DOF's capabilities for firefighting, forest management, and access to the general public. The Construction Section coordinates design, engineering, bid specifications, and construction management for each project.



Equipment

The Equipment Section of the Bureau of Forest Resource Planning and Support Services (FRPSS) has statewide responsibility for fleet management for DOF. Another of the Equipment Section's major tasks is the procurement of specialized firefighting and land management equipment and vehicles. In fiscal year 2009-2010, DOF received \$1.1 million in state funding and \$2.8 million in grant funding for the purchase of forestry equipment. With these funds, the Equipment Section procured 13 fire plows, 13 pickup trucks, 11 engines, eight transports, five dozers, five mitigation mowers, three utility vehicles, and one excavator.

ANNUAL REPORT 2009 / 2010

CONSERVING THE NATURAL ENVIRONMENT

This section is also responsible for equipment inventory, equipment maintenance and repair, equipment specification development for acquisition, equipment acquisition, solving equipment problems, disposal of surplus equipment, and warranty issues. Certain purchases, such as transports and engines, receive custom fabrication to meet firefighting and land management specific requirements at DOF's Lake City Central Shop.

The following list illustrates the range and scope of projects that the Equipment Section completed during fiscal year 2009-2010:

- Oversaw the construction of 28 off-road engines by the Lake City Shop.
- Coordinated the sale of surplus equipment at auction for a total revenue of \$715,000.
- Continued the cleanup of equipment information data.
- Worked on implementation of the state's move from ComData fuel card to the Wright Express fuel card.
- Coordinated with Department of Management Services to revise statewide replacement criteria for automobile and light truck replacement.
- Represents DOF on the State Fleet Steering Committee.
- Revised DOF's equipment standards for operators.

- Rewrote DOF Policy 410 covering motor vehicle acquisition, use, and maintenance.
- Organized and oversaw a safety maintenance and operator training course covering crawler tractors from John Deere.
- Obtained permission for the complete overhaul of the account method used for acquisition and warehousing of equipment parts; designed and implemented the new accounting system.
- Revised the methods used for reporting delinquent preventative maintenance. The new method reports actual numbers that can be backed up with computer data.
- Worked with management and the field units to achieve 95 percent compliance with preventative maintenance requirements.
- Coordinated the monthly Department of Financial Services audit of fuel purchases.
- Coordinated the Inspector General's ongoing audits of fuel purchases.
- Investigated the loss of equipment by fire and reported steps that needed to be taken to prevent future losses.
- Worked closely with DOF's Safety Committee to resolve equipment-related issues.
- Worked with the Equipment and Safety committees to lay groundwork for a statewide training program covering the operation and use of winches.
- Rewrote and obtained approval of the requirements necessary for Mechanics to obtain the position of Master Mechanic



Honor Guard

The Honor Guard is made up of firefighters from DOF. They represent DOF, the forestry and firefighting profession, and the State of Florida at various special events. The DOF Honor Guard strives for perfection in the presentation and display of the colors of the United States and the State of Florida. The Honor Guard is designed to provide DOF with a specially trained ceremonial team to render honors, instill pride, preserve tradition, and stimulate espirit-de-corps. This past year, the Honor Guard added eight additional members for a total of 12 members throughout the state. The entire Honor Guard Team attended the National Honor Guard Academy that was hosted by the Florida Center for Wildfire and Resource Management Training.

Florida Center for Wildfire and Forest Resource Management Training

Fiscal year 2009-2010 marked the 12th year of operation for the Florida Center for Wildlife and Forest Resources Management Training in Brooksville. The Center provides classes in Basic Fire Control Training (BFCT) to DOF's new firefighters. The eight-week training program is offered twice per year. This year, 38 new candidates

received certification as Wildland Firefighters in Florida.

The center also provided 89 open-enroll-ment training courses during the fiscal year. These included courses in wildland firefighting, incident management, instructional development, vehicle repair and maintenance, all hazards incident management, health and safety, and natural resource management. These courses were attended by 1,435 DOF employees and 982 non-DOF (cooperator) students.

The center also provided environmental education to teachers and students through DOF's Future Farmers of America and Envirothon Program. In addition, DOF also cohosted the annual Florida Forestry Teachers' Tour in mid-June to provide Florida educators the opportunity to learn more about forestry. Through visits to public, private, and industry timberlands and forest-products manufacturing plants, the 44 teachers were able to gain hands-on knowledge of the forestry profession to take back to their classrooms. The three-day tour is supported primarily by donations from the forestry industry, and is offered free of charge to the teachers, who may also earn 30 continuing education units (CEUs).





Division of Consumer Services

During fiscal year 2009-2010, the Division of Consumer Services continued its legacy of serving as Florida's clearinghouse for matters relating to consumer protection and information. Division staff adequately provided consumer information, processed written complaints, and promoted consumer protection. During this period, the division's Consumer Assistance Call Center handled approximately 251,798 telephone calls and 7,091 e-mail requests to assist consumers and businesses. Additionally, the division received 39,874 written complaints, recovered \$5,190,090 in consumer refunds and property, and provided 598,941 brochures, pamphlets, and booklets for distribution to consumers.



The division continued to increase public awareness through its consumer outreach program by providing speakers and offering consumer education programs to civic groups, community organizations, and high schools throughout the state. The speak-

ers provided general consumer information, and the latest news on scams, fraud, and deception. They also provided educational materials on a variety of topics. In addition, the division utilized its web site www.800helpfla.com to educate consumers and businesses. The web site served as a valuable source for information on the many services provided by this agency and other government and non-government offices. Businesses have access to licensing and registration information, as well as the forms necessary to comply with applicable regulations. Online services are available, making it more convenient to do business with the Department. Some businesses can renew their registrations and submit filings and purchase lists, and consumers can file a complaint online to have their dispute mediated.

The Department also functions as the U.S. Consumer Product Safety Commission's liaison in Florida regarding product recalls, inspections, and investigations.

Consumer Assistance Call Center

The Consumer Assistance Call Center maintains and operates the Department's toll-free consumer hotline, 1-800-HELPFLA (1-800-435-7352), and the Spanish hotline, 1-800-FLAYUDA (1-800-352-9832). The Call Center is staffed with trained personnel who respond to a wide variety of consumer questions about Florida laws and other consumer-related issues. They assist callers in locating the appropriate governmental office they are seeking and then transfer the caller to that office. They provide up-to-date and relevant information as well as educational brochures upon request.



Consumer questions cover various areas the Department regulates, such as business opportunities, dance studios, game promotions, health studios, intrastate moving, motor vehicle repair, Florida's Do Not Call program, pawnshops, sellers of travel, solicitation of charitable contributions, telemarketing, and the motor vehicle "Lemon Law." The Consumer Assistance Call Center staff also responds to inquiries on a multitude of subjects that are not regulated, such as landlord/tenant issues, retail store regulations and Internet sales. Staff utilizes the Department's computer database to develop statistical information on the frequency and type of calls received. Each call is logged under a specific subject category in the database, which allows the Department to track and analyze the most prevalent consumer issues. This record enables consumer education efforts to be tailored to the specific needs of the public.

During fiscal year 2009-2010, staff provided 415,229 assists to consumers and businesses by providing information, brochures, and complaint and registration forms. Eighty-two percent of callers responding to surveys ranked the Consumer Assistance Call Center's service as outstanding. Also during fiscal year 2009-2010, the Consumer Assistance Center's Spanish team and other division staff received a Davis Productivity Award for the development of a Spanish A-Z Resource Guide. The development of the Spanish guide was an enhancement to the already existing English A-Z Resource Guide. The guide was also enhanced to allow users the ability to search by subject. This resource guide is used by consumers and other government agencies to locate the most appropriate source for information.

As part of the Division of Consumer Services COOP (Continuity of Operation Plan), the Consumer Assistance Center can operate at virtually any location with high-speed Internet access in case of an emergency or pandemic.

Consumer Complaints

Complaints are received online and via mail, and deal with a variety of subjects. The Bureau of Mediation and Enforcement processes all consumer complaints filed with the Division of Consumer Services. Division staff reviews each complaint for violations of applicable laws. If the complaint falls within the jurisdiction of the Department or if it is a non-regulated complaint, staff will attempt to resolve disputes through formal or informal mediation. Complaints that fall under the jurisdiction of another federal, state, or local governmental agency are referred to that office for

processing. The top five complaint categories during fiscal year 2009-2010 were: telephone sales solicitations (Do Not Call), telemarketing, credit and banking, communications, and travel and vacation plans. During fiscal year 2009-2010, the division received 17,705 complaints filed against entities regulated by the division and recovered \$2,952,348 in monetary refunds and property for consumers. In addition, another 19,898 complaints filed against nonregulated businesses were received, which resulted in \$2,237,742 in monetary refunds and property to consumers. The division also assisted in recovering an additional \$233,370 in consumer refunds from security instruments (bonds, letters of credit, or certificates of deposit) filed with the Department for the protection of consumers from a breach of contract.

Motor Vehicle "Lemon Law"

The Department administers the Florida Motor Vehicle Warranty Enforcement Act, commonly known as the "Lemon Law." Personnel respond to consumer complaints and inquiries, provide information about the Lemon Law, and determine whether claims are potentially eligible for state arbitration before the Florida New Motor Vehicle Arbitration Board. The Department also provides certification to motor vehicle manufacturers who establish informal dispute settlement procedures in compliance with applicable federal and state statutes. In fiscal year 2009-2010, the Department recertified informal dispute settlement procedures for General Motors (GM), Honda/ Acura, Nissan/Infinity, Bentley, Volkswagen/ Audi, AM General, Isuzu, Hyundai, Kia Motors, Mazda, and Ford Motor Company. These manufacturers utilize the Better Business Bureau Auto Line to administer their

programs. Toyota and Lexus were also recertified. These manufacturers utilize the National Center for Dispute Settlement (NCDS) to administer their programs. Porsche was recertified and DeMars and Associates, CAP-Motors, administered its program. Each of these programs is audited throughout the year for compliance.

During fiscal year 2009-2010, the division answered 8,933 telephone calls on the Lemon Law hotline, 1-800-321-5366. The division also processed 454 requests for state arbitration and approved 443 of these for referral to the Attorney General's Office. In addition, division staff reviewed 1,756 consumer cases that were processed through the manufacturers' informal dispute settlement programs. Every year millions of dollars are recovered for consumers through the manufacturers' informal dispute settlement programs. During this fiscal year, consumers received approximately \$8,128,836 in refunds.

Regulated Programs

The Department is responsible for regulating a variety of industries operating in Florida, including business opportunities, dance studios, game promotions/sweepstakes, health studios, intrastate moving, motor vehicle repair shops, Florida's Do Not Call program, pawnshops, sellers of travel, solicitation of contributions, telemarketing, and professional surveyors and mappers. These programs are designed to protect consumers and the integrity of each industry. Industry members must submit a registration/ license application or similar filing and, in some cases, a surety bond, certificate of deposit, or letter of credit to ensure consumer refunds in the event a business defaults.

Business Opportunities

The Business Opportunities Program requires individuals who sell or lease any products, supplies, or services for the purpose of starting a business to register and disclose certain information to prospective purchasers. Some sellers must also submit a \$50,000 surety bond, certificate of deposit, or letter of credit. In fiscal year 2009-2010, there were 2,550 sellers of business opportunities and franchises registered with the Department, and staff processed 235 written complaints, investigations, and enforcements. Additionally, as a result of the division's mediation efforts, consumers received \$117,223 in refunds.

Dance Studios

The Dance Studio Program requires all ballroom dance studios to register with the Department. In some instances, registrants are required to post a surety bond, certificate of deposit, or letter of credit. For fiscal year 2009-2010, there were 223 dance studios registered with the Department, and staff processed 46 written complaints and enforcements. Additionally, staff recovered \$8,505 in consumer refunds and collected \$5,100 in administrative fines.

Game Promotions

The Game Promotions Program requires operators who conduct contests, games of chance, or gift enterprises in connection with the sale of consumer products or services in which the total announced value of prizes offered is greater than \$5,000 to file with the Department. Unless they have been granted a waiver, operators are also required to establish a trust account or

obtain a bond in an amount equivalent to the total value of all prizes offered. During this fiscal year, the Department started using e-commerce to allow game promoters to conduct online transactions when filing promotions. Game promoters filed 1,290 promotions using the Department's e-commerce system. During fiscal year 2009-2010, staff processed 5,928 game promotion filings and 956 written complaints, investigations, and enforcements. Additionally, staff recovered \$4,485 in consumer refunds and collected \$300,000 in administrative fines.

Health Studios

The Department regulates health clubs that offer health club activities or physical exercise equipment. Some health studios are required to post a \$50,000 surety bond, certificate of deposit, or letter of credit to satisfy consumer claims that may result from violations of Florida law. During fiscal year 2009-2010, there were 2,134 health studios registered with the Department, and staff processed 1,074 written complaints, investigations, and enforcements. Additionally, staff recovered \$68,404 for consumers and collected \$58,925 in administrative fines.

Intrastate Moving

The Department regulates intrastate moving companies operating in Florida. This law requires a written estimate be given to consumers before the mover provides any moving or packing services. During fiscal year 2009-2010, there were 991 intrastate moving companies and seven moving brokers registered with the Department. Staff processed 639 written complaints, investi-

gations, and enforcements. In addition, as a result of the division's mediation efforts, staff recovered \$21,798 in consumer refunds and services and collected \$54,658 in administrative fines.

Motor Vehicle Repair Shops

The Motor Vehicle Repair Act requires an estimate and invoice form be provided to consumers for repair work exceeding \$100. During this fiscal year, the Department continued using e-commerce to allow motor vehicle repair shops to conduct online transactions when renewing their registration. This fiscal year, 2,261 motor vehicle repair shops renewed their registration using the online renewal process. There were 24,484 motor vehicle repair shops registered with the Department. Department staff processed 4,820 written complaints, investigations, and enforcements. Additionally, as a result of the division's mediation efforts, staff recovered \$333.624 in refunds for consumers and collected \$188,780 in administrative fines.

Do Not Call

The Florida Do Not Call Law is a privacy law enacted to protect consumers from unwanted telephone solicitations and pre-recorded messages. Consumers can subscribe to the Do Not Call List for an initial fee of \$10, with a \$5 annual renewal fee. Subscribers may file a complaint with the Department for any unwanted phone calls they have received from non-exempt businesses. Consumers may also file a complaint if they receive pre-recorded messages. At the end of fiscal year 2009-2010, the Department had processed 7,373 new subscriptions and 78,091 renewals for a total of 85,464 sub-

scriptions. The program processed 6,930 written complaints and enforcements. A total of \$19,000 was collected in civil penalties.

Pawn Shops

The Department licenses all pawnshops operating in Florida pursuant to the Florida Pawnbroking Act. Each pawnshop must maintain a net worth of at least \$50,000 or file a \$10,000 security in the form of a surety bond, certificate of deposit, or letter of credit. During fiscal year 2009-2010, there were 1,368 pawn shops licensed with the Department. Staff processed 172 written complaints, investigations, and enforcements. Staff recovered \$8,938 in consumer refunds and collected \$46,200 in administrative fines.

Sellers of Travel

Travel agencies that maintain a business location in Florida or that offer to sell to persons in Florida are regulated by the Department for compliance with the Sellers of Travel Act. Non-exempt sellers of travel must register and, in some cases, submit a performance bond, certificate of deposit, or letter of credit in an amount not to exceed \$25,000, or \$50,000 if they sell vacation certificates. A seller of travel that has been in business for at least five years and meets certain other requirements may apply for a security waiver. In addition, independent agents must submit annual filing statements to the Department. During fiscal year 2009-2010, 6,855 sellers of travel and independent agents were registered with the Department. One hundred thirty-two sellers of travel registered using the online registration process. Staff processed

2,600 written complaints, investigations, and enforcements. Additionally, as a result of the division's mediation efforts, staff recovered \$989,213 in consumer refunds and collected \$29,450 in administrative fines.

Solicitation of Contributions

The Solicitation of Contributions Act requires charitable organizations, sponsors, professional fund-raising consultants, and professional solicitors to register with the Department. During fiscal year 2009-2010, there were 16,588 charitable organizations, sponsors, professional solicitors, and fundraising consultants registered with the Department. The Department processed 1,428 written complaints, investigations, and enforcements. Additionally, the Department collected \$122,058 in administrative fines. The Department publishes the Gift Givers' Guide, an online resource guide that provides the financial information reported by registered charitable organizations. During this fiscal year, the Gift Givers' Guide was enhanced, giving consumers the capability to research registered charitable organizations by name or names and/or by registration number.

Telemarketing

The Florida Telemarketing Act requires non-exempt telemarketers to obtain a license from the Department and submit a \$50,000 surety bond, certificate of deposit, or letter of credit. During fiscal year 2009-2010, there were 18,205 businesses and individuals licensed with the Department. During this time, 1,479 commercial telephone sellers and salespersons registered using the online registration process. Staff processed 5,370 written complaints, investigations, and enforcements. In addition, staff

recovered \$1,418,662 in consumer refunds and collected \$472,167 in administrative fines.

Professional Surveyors and Mappers

Effective October 1, 2009, the Florida Board of Professional Surveyors and Mappers and all related licensing and regulatory functions moved to the Department of Agriculture and Consumer Services from the Department of Business and Professional Regulation. The board consists of nine members, including seven professional surveyors and mappers, one of whom must be a photogrammetrist, as well as two consumer members. These board members are appointed by the Commissioner of Agriculture and are from several locations around the state. The board office is located in Tallahassee. The board has been charged by the Florida Legislature with protecting the public interest and encouraging the entry of qualified individuals into the profession. The board does this by approving individuals and businesses applying for licensure as professional surveyors and mappers. Individuals must meet certain education, experience, and testing criteria prior to licensure.

The board also provides protection by enforcing compliance with the Florida Statutes and Florida Administrative Code by disciplining those licensees who violate the professional practice act. The board meets in person four times per year in various locations around the state and sometimes by conference call between meetings. Additionally, the Division of Consumer Services aids in this enforcement by investigating and disciplining violations of both the Florida Statutes and Florida Administrative Code as it relates to unlicensed activity.

There are approximately 4,500 licensed individuals and businesses. Since the effective date of the move, the board has imposed \$28,020 in fines and \$16,942.97 in investigative costs, placed seven licensees on probation, and accepted the voluntary relinquishment of one business.

Investigations

During this fiscal year, the Bureau of Investigations was created. The Bureau of Investigations conducts investigations of businesses (both regulated and non-regulated) and responds to consumer complaints. The priority for this bureau is to ensure businesses operate in compliance with applicable laws. This Bureau of Investigations also investigates businesses suspected of fraud and deceptive trade practices. During fiscal year 2009-2010, the Bureau of Investigations worked 1,645 enforcements and initiated 1,215 investigations covering a variety of topics. The high-volume cases for investigations were motor vehicle repair, unlicensed telemarketing, and sellers of travel. During fiscal year 2009-2010, the Bureau of Investigations conducted statewide sweeps of the motor vehicle repair, intrastate moving, and telemarketing industries in 19 counties. These sweeps resulted in the discovery of 438 violations, the issuance of 193 orders to cease and desist unlicensed telemarketing activity, and the collection of \$586,000 in administrative fines.

Consumer Education

The Division of Consumer Services continued to promote its educational outreach programs aimed at increasing public awareness of consumer protection issues among

Florida citizens. During fiscal year 2009-2010, the division provided 3,489,377 assists to consumers and businesses statewide through a variety of formats, including the web site, newspaper articles, newsletters, brochures, and public presentations.

Division representatives gave public presentations on consumer-related topics to 12,422 consumers representing various groups and organizations throughout the state. The division's web site was monitored and updated on a regular basis to include relevant information to businesses and consumers on various laws as well as current frauds and scams. The web site received a total of 2,489,377 web visits during fiscal year 2009-2010.

At the end of fiscal year 2009-2010, the subscription list for the monthly e-newsletter for Florida consumers contains more than 97,000 subscribers. The newsletter provides quick tips on important consumerrelated issues and lists resources for finding additional information. Additionally, the division continued to submit articles on consumer-related issues to the "Elder Update," a newsletter published by the Florida Department of Elder Affairs. More than 70,000 copies per issue were distributed to senior citizens on a bi-monthly basis. Consumer education is the main focus of the division. The division's educational efforts focus on helping individuals become wiser consumers and empowering them to make informed decisions when purchasing products and services and signing contracts.

During this fiscal year, the division continued its outreach efforts to Florida's high schools through an outreach program entitled "Consumer Survival Skills 101," a

program designed to educate high school students about their rights and responsibilities as consumers. The program provides them with the necessary tools to make intelligent and informed decisions in a global marketplace. The program was presented to more than 7,400 teachers and students. The Department continued sponsorship of the Florida LifeSmarts program for the 14th vear. LifeSmarts is an innovative competition that tests students in grades nine through 12 on their knowledge of personal finance, health and safety, the environment, technology, and consumer rights and responsibilities. The Florida online competition involved more than 1,300 students from public and private high schools, FFA and 4-H clubs, and home-school settings throughout the state. Students competed online to be among Florida's finalists to compete for the state title. The 2010 national LifeSmarts competition sponsored by the National Consumers League of Washington, D.C., was held in Miami Beach. State champion teams from across the nation traveled to the national competition to compete to become the national LifeSmarts champions. Seminole 4-H, a group of home-school students from Sanford, Florida, represented Florida at the national competition.

Division of Standards

Petroleum Inspection

The Department regularly conducts inspections of the petroleum distribution system and tests samples of alternative and petroleum fuels to ensure compliance with state quality standards. Inspections and testing ensure that consumers are being offered

quality products at fair measure. The Department's three petroleum-testing laboratories routinely test the quality of gasoline, kerosene, alternative fuels (e.g., biodiesel, E85, and denatured fuel ethanol), diesel and fuel oil through octane rating, distillation, vapor pressure, vapor-liquid ratio, sulfur content, oxygenate content, lubricity, flash point, sulfate and chloride content, and other related analytical laboratory tests.

In fiscal year 2009-2010, 97.8 percent of the products collected and tested met state standards, which are considered among the strictest in the nation. The samples represent more than 8.8 billion gallons of alternative and petroleum fuels distributed throughout Florida. During this period, the Department issued 602 stop-sale orders to prevent the sale of more than 9,374,080 gallons of substandard or improperly labeled fuel.



During this fiscal year, the petroleum laboratories, located in Tampa, Tallahassee, and Port Everglades, conducted 156,504 tests on petroleum and alternative fuels and antifreeze and brake fluid products. Department petroleum field inspectors also

conducted 225,243 inspections on retail motor fuel dispensers at approximately 8,991 retail motor fuel facilities throughout Florida. Petroleum field inspections included calibrating tests, proper installation and maintenance of measuring devices, pricegouging investigations, testing for water and debris, verification of alternate-generated electricity wiring and equipment, and correct labeling of motor fuel dispensers. As a result of these inspections, 3,463 motor fuel pumps were cited for improper calibration and 35,753 correction notices were issued for improperly maintained pumps.

The Department is also responsible for registering and monitoring antifreeze and brake fluid products sold in Florida. Laboratory personnel analyze antifreeze products for corrosion, freezing point, boiling point, and chemical content, and brake fluid products for boiling point, elastomer swelling, and chemical content before registering such products as suitable for sale to the public. During fiscal year 2009-2010, the Department registered 338 brands of antifreeze and 160 brands of brake fluid as acceptable products to be marketed throughout Florida.

The Department also handled 3,412 petroleum-related consumer- and pricing-related complaints as a result of posting the 1-800-HELPFLA consumer hotline decal on motor fuel dispensers. Complaints were concentrated primarily on fuel quality, meter accuracy, and price. The petroleum inspection field staff works to respond to these complaints within 24 to 48 hours. This past year the Department continued to inspect and monitor the more than 1,000 wholesale and retail motor fuel facilities that were required to have alternate-generated

power equipment and/or wiring installed to operate designated facility functions during an electrical outage. Affected facilities were required to install electrical transfer switches capable of connecting to backup electricity generators, which may be used to supply electrical power to facilities and supply available fuel to consumers during a disaster.

Renewable and alternative fuels continue to migrate further into Florida's motor fuel marketplace. Following years of preparation for such products, the Department's petroleum testing laboratories continue to test such fuels entering the marketplace, ensuring compliance with state fuel-quality standards and providing maximum consumer protection for consumers purchasing these products. Revised standards continue to be evaluated and adopted to ensure maximum consumer protection when purchasing these fuels.



The Department also uses numerous fraud-investigation techniques, including the deployment of undercover vehicles, to ensure that consumers receive fair measure

from fuel pumps. The unmarked vehicles have a specially designed and calibrated fuel tank that enables a trained inspector to determine a pump's calibration without a service station operator's knowledge. The undercover vehicles have confirmed that most fuel pumps in Florida are accurate and consumers are receiving fair measure.

Fair Rides Inspection

The Department has an amusement ride inspection program which, by reputation, is the most comprehensive of any state in the country. All amusement rides, except those at theme parks, which are exempt by law, are inspected and permitted each year by the Bureau of Fair Rides Inspection. Permanent amusement rides – those located at a fixed site – are inspected twice each year. Temporary amusement rides, such as those used by carnivals, are inspected each time they are moved or set up. Currently there are 210 permanent locations and 171 temporary or traveling amusement ride companies operating in Florida.

To handle this workload, the Department has 15 inspection specialists stationed statewide to inspect and permit amusement rides. Department inspectors are constantly trained with recurring on-the-job training. Structured training seminars developed by the Department help inspectors keep abreast of the latest information on the more than 1,000 different rides currently permitted for operation. In addition, continuing education seminars sponsored by the amusement industry, amusement ride manufacturers, safety organizations, and engineers or other subject matter experts keep inspectors current on the latest inspection techniques.



In fiscal year 2009-2010, the Department issued permits for 1,669 amusement rides and conducted 9,068 inspections statewide. Those inspections identified 18,071 deficiencies on those amusement rides, all of which were corrected before the rides were allowed to open for public use. The Department issued 230 stop-operation orders for unsafe, uninsured, or un-inspected amusement rides and six administrative complaints for violations and non-compliance. The Department also investigates accidents and mechanical failures involving amusement rides and, when appropriate, closes and impounds unsafe amusement rides. There were more than 145 reportable accidents in fiscal year 2009-2010 that were fully investigated, analyzed, and used to develop preventive measures. Recently the bureau revised and updated its database to compile accidents, violations, mechanical defects, and consumer complaints in order to provide a comprehensive amusement-ride company profile for use by the public.

The Florida Amusement Device and Attraction Advisory Committee was created in

1991 by the Commissioner of Agriculture to advise and consult with the Department on amusement ride issues. The committee, which is appointed by the Commissioner, includes a cross-section of members from the amusement industry, fair industry, amusement parks, and technical or subject matter experts. This committee holds at least two public meetings annually to discuss safety issues, ride inspections, ride equipment, industry concerns, and other matters in support of the Department's inspection program.

Each year, the Department participates in a consultation program with the large theme parks in Florida on safety issues. Department staff visits each of the parks and reviews safety, maintenance, and operation procedures of the park rides. Furthermore, the theme parks file an affidavit of annual inspection on all their rides. The Department is a member of the American Society of Testing and Materials, Committee F-24, which develops standards for the manufacture, fabrication, performance, and testing of amusement rides and devices. The Department is also a member of the Council for Amusement and Recreational Equipment Safety (CARES), which is a national association of government regulatory officials that shares information among members and works with the U.S. Consumer Products Safety Commission on amusement ride issues.

Liquefied Petroleum Gas Inspection

The Bureau of Liquefied Petroleum (LP) Gas Inspection is charged with the regulation of LP gas usage, storage, distribution, handling, and transportation from the time the product enters the state until it reaches its final point of consumption. There are more than 3,500 storage and distribution facilities in the state which handle approximately 400 million gallons of propane annually. At any given time, there are approximately 20 million gallons of propane stored in these facilities.

During fiscal year 2009-2010, the bureau conducted 10,145 facility inspections and issued 13,910 licenses. The numbers in these categories are more than double what they were 10 years ago. The bureau investigated 57 LP gas-related accidents (as compared to 26 accidents the prior fiscal year), and took 3,812 enforcement actions to ensure compliance with safety regulations (as compared to over 4,300 during fiscal year 2008-2009), including the issuance of 790 notices of noncompliance, 1,965 notices of licensure cancellation (for expired insurance), and 951 cease-and-desist notices. During the past two fiscal year terms, the number of enforcement actions has decreased each year. This is attributed to the work being done by the bureau's staff, including 11 field inspectors who work closely with both consumers and industry professionals to increase awareness of and compliance with applicable laws, rules, and safety regulations.

In carrying out its goal of ensuring that LP gas is utilized safely, the bureau continues to develop and administer competency



examinations to persons interested in engaging in LP gas-related activities. Over 850 examinations were administered during fiscal year 2009-2010. In addition, the bureau conducted 40 classes dealing with safety training for dispensing-unit operator personnel, building officials, and pipeline distribution system operators.

In May 2010, the bureau co-sponsored the annual Ocala Safety School, which had 46 participants. Each year this weeklong school draws attendees from all over the world. Five bureau personnel, including four of its inspectors, taught classes at the Safety School. The school covers, in only one week, the procedures, equipment, testing, safety codes and laws, and rules and regulations needed to pass the state licensure examination, which is administered at the end of the week. This year, all persons attending the Safety School sat for the state examination. Nineteen of 46 students, or 41 percent, passed all parts of the examination on the first test administration. In 2009, 24 of 49 students taking the examination, or 49 percent, passed all parts of the exam upon initial administration. Although this year represents a decline in the percentage of students passing the exam the first time, the large decline in the overall number of attendees (87 students attended last year) may have contributed to this result. Each year, students are asked to comment on the quality of the instructors and course content. As in past years, the bureau's inspectors garnered the highest instructor marks, with most attendees commenting on the inspectors' professionalism, knowledge, and ability to communicate in the classroom setting.

In addition to carrying out the regulatory duties prescribed in Chapter 527, F.S., the

bureau is charged with administrative oversight for the Florida Propane Gas, Education, Safety, and Research Act. Under this Act, a regulatory monetary assessment is collected annually from the propane gas industry to fund programs for training, education, consumer safety, marketing, research, and development relating to the propane industry in Florida. In conjunction with this program, the Department maintains a consumer information web site and publishes and distributes thousands of consumer safety brochures relating to home-heating safety, safe grilling, general safety practices, and the reporting of gas system changes to gas suppliers. For example, the bureau distributed detailed alerts warning consumers as to the use of LP gas cylinders that may have been contaminated via contact with anhydrous ammonia, which is utilized in the production of methamphetamine. Alerts were sent to consumers both through mail-outs and the bureau's web site.

Other significant activities during the 2009-2010 fiscal year include:

- Participation in multiagency meetings to address Chinese drywall issues plaguing many Florida homes. The bureau provided guidance and expertise on remediation of drywall problems in regard to propane systems.
- Continual improvement on and promotion of the e-commerce web site for online licensing, training, and examination registrations. The web site has allowed the bureau to shorten by at least two weeks the typical timeframe involved in processing licensure renewals. This is important because all licenses expire on the same day each year, creating a bottleneck.

- Work with local building and permitting officials to enforce statutory guidelines and ensure code compliance in the growing home and commercial generator market.
- Participation on the Florida Propane Gas Association's Codes and Standards Committee and the Safety and Education Committee, to address safety code and training issues in Florida.
- Training of fire-safety officials and building officials in counties throughout Florida.
- Inspections of approximately 300 cylinder installations at the Florida State Fair.
- Work with industry officials in establishing standards to allow Temporary Emergency Distribution Sites (TEDS), or temporary emergency staging areas, to be set up where propane can be purchased immediately following an emergency situation, such as a hurricane. TEDS will be set up in populated areas directly impacted by natural disasters and other emergencies to ensure that consumers are able to purchase propane for emergency generators and other important home uses.
- Conducting an LP gas safety seminar at the annual Florida Spa/Pool Association meeting.
- Training of county public school maintenance staff in Orange and Osceola counties. The bureau provided licensure examinations for all maintenance staff in the Duval County School System and continued to co-inspect LP gas systems on school properties with various county school board technicians.

 Inspections with Walt Disney World officials and training to Disney staff in regard to LP gas safety and operations.

Weights and Measures

The Department conducted over 59,000 inspections and accuracy tests on commercial weighing and measuring devices.



Staff ordered 3,060 devices to be corrected because they were found to be out of compliance with adopted standards. Another 1,526 devices were taken immediately out of service because they were found to have excessive measuring errors. Commercial weighing and measuring devices include retail scales, prescription balances, livestock scales, truck scales, and taximeters.

Department inspectors check the accuracy of net contents and labels of packaged goods, including food products, dry goods, household items, building and construction materials, gardening products, and hundreds of other products purchased daily by consumers and businesses in the state. In fiscal year 2009-2010, inspectors sampled lots representing more than 175,000 packages. Stop-sale orders were placed on

more than 16,000 packages that contained less than the stated contents or failed to provide the required information on the label. Many more packages were recalled or relabeled by producers as a result of Department inspections. A risk-assessment procedure is employed that enables inspectors to more efficiently evaluate packages for compliance and target packages more likely to be in violation.

Inspectors randomly tested 5,876 items for price accuracy in 106 businesses, primarily grocery, department, discount, drug, building supply, and other retail stores. Overall results showed that 0.61 percent scanned at more than the posted price and 0.51 percent scanned at lower than the price advertised. Violations were corrected immediately, and five businesses that failed to meet the 98 percent national accuracy standard faced additional sanctions and testing.

The 2009 Legislature established permitting requirements for businesses operating commercial weighing and measuring devices in the state. The Department contacted over 17,000 businesses that records indicated may be subject to the new requirements and issued annual permits to over 16,000 businesses between September 2009 and July 2010. There were more than 5,300 field inspection visits related to permitting the businesses conducted during the year.

In the state metrology laboratory, the state primary standards of mass, length, and volume were used in comparing and calibrating more than 10,900 mass standards used by state inspectors, laboratories, high-tech industries, and commercial scale-repair agencies, as well as 736 test measures used to check the accuracy of gas pumps

and wholesale meters. The laboratory maintained its National Voluntary Laboratory Accreditation Program accreditation for providing traceable calibration services. The lab was one of the first state metrology laboratories to achieve this accreditation. In addition to providing Florida citizens, industries, and government agencies with calibration services, the lab performs special tests such as standardizing grain samples for use in testing moisture-determining equipment at commercial grain elevators. It also fabricates specialized measuring equipment needed by field staff in performing tests of devices and packages throughout the state.

Division of Licensing

Overview

The Division of Licensing oversees two licensing programs. One program involves professional regulation. Under the authority of Chapter 493, F.S., the division licenses and regulates both individuals and agencies in the private investigative, recovery, and security professions in Florida. The other program relates to personal safety and self-protection. Under the authority of Section 790.06, F.S., the division issues concealed weapon licenses to individuals who wish to carry concealed weapons for purposes of lawful self-defense.

These programs are fundamentally different in their function and in the constituencies they serve. However, the various licensing controls and regulatory mechanisms that support these programs – fingerprint-based background checks; verification of experience, training, citizenship status, and

other eligibility criteria; the ongoing review of criminal history records to confirm continued eligibility – ensure that only properly trained, knowledgeable, qualified, and lawabiding persons are licensed to work in the regulated industries and to carry concealed weapons. These programs thus promote the public interest and general welfare by enhancing public safety.

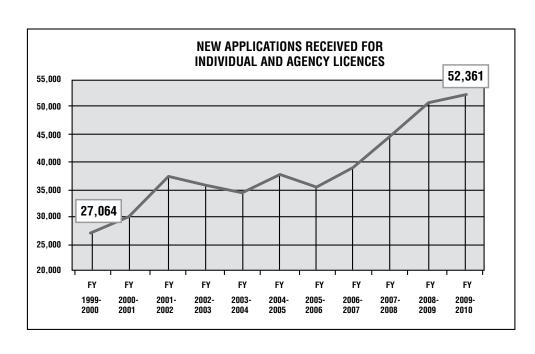
Benchmarks and Achievements

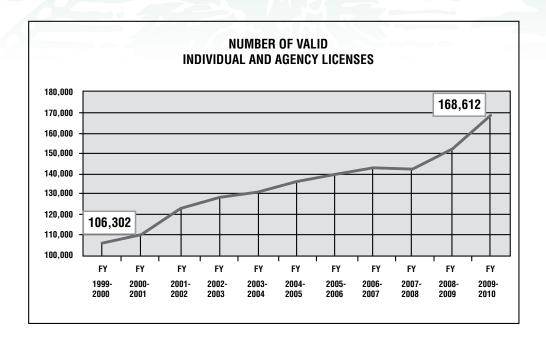
The division received a combined total of 364,900 new and renewal applications in the two licensing programs in the course of fiscal year 2009-2010, compared with 295,970 in fiscal year 2008-2009. The division issued 219,601 new licenses and 145,299 renewals. These figures are all-time records in license production and output.

Growth in the professional licensing program continues, with the number of incoming applications for new individual and agency licenses trending upward every year.

Ten years ago, in fiscal year 1999-2000, the division received 27,064 new applications. The number of applications for new licenses received in fiscal year 2009-2010 was 52,361, up 93 percent from 10 years ago.

The rate of growth in these industries depends on a number of factors, ranging from changes in population to economic fluctuations to the number of new business startups in Florida, and so on. Generally, during the past decade, the actual number of individuals and agencies licensed to work in the private investigative, recovery, and security professions has not dramatically increased from year to year. However, the total number of individuals and agencies licensed under Chapter 493, F.S., was 168,612 at the close of 2009-2010, an increase of almost 11 percent from fiscal year 2008-2009. This is the second highest percentage annual increase in the total number of professional licensees in the past decade. The charts below reflect the increase in the number of new individual and agency applications submitted for licenses under Chap-





ter 493, F.S., and the growth over the past 10 years in the total number of licensees in the regulated professions.

As has been the case for several years now, the concealed weapon licensing program continued to grow at an unprecedented pace. A quick comparison between what the program looked like 10 years ago and what it looked like at the end of last fiscal year will illustrate the magnitude of the increase in the demand for concealed weapon licenses.

Ten years ago, during fiscal year 1999-2000, the division received 28,618 applications for new concealed weapon licenses. At the end of fiscal year 2009-2010, the division received 167,240 applications for new concealed weapon licenses, an increase of almost 484 percent over the number of applications for new licenses received 10 years ago.

At the end of fiscal year 1999-2000, there was a total of 247,704 concealed weapon license holders. By the end of fiscal year

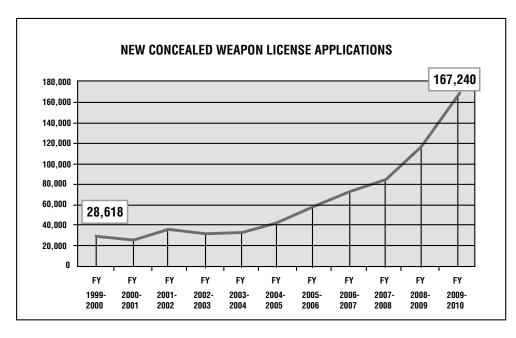
2009-2010, the number of concealed weapon license holders stood at 739,222, an increase of 198 percent in the concealed weapon licensee population in 10 years.

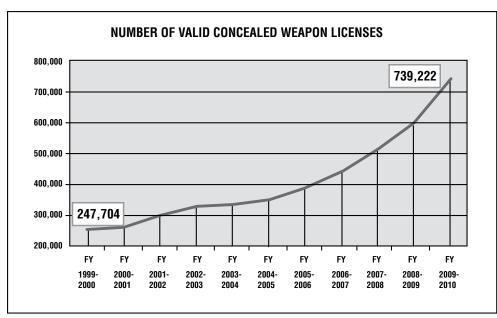
The charts below reflect the tremendous increase in the number of incoming new concealed-weapon application licenses over the years and the dramatic surge in the number of concealed weapon licensees. The total licensee population in the division's two licensing programs is now over 900,000, and division management anticipates this number will exceed 1 million sometime during fiscal year 2010-2011. With an ever-increasing number of applicants and a constantly rising number of total licensees, the demand on the division's services and its resources also continues to grow.

Incoming telephone calls to the division's Public Inquiry Section dropped from an all-time high of 389,431 calls for fiscal year 2008-2009 to 300,065 last year. On the other hand, incoming calls to the Compliance Section rose from 40,834 calls in fiscal year

2008-2009 to 44,754 last year. Still, as was the case during fiscal year 2008-2009, the resources available to the division to devote to telephone call duty were limited, and callers faced long delays while waiting to speak with a division representative. As a result, many calls were dropped or abandoned.

The division remained vigilant in its efforts to prevent unlicensed and unlawful activity in the regulated industries. The Bureau of Regulation and Enforcement (BRE) conducted 1,190 investigations of complaints made against individuals and agencies for violating the provisions of Chapter 493, F.S. This total was down from the 1,447 complaint investigations completed by BRE in fiscal year 2008-2009 primarily because of the need for the Regional Office investigator supervisors to remain on site for the implementation and oversight of the "fast-track" concealed weapon license applica-





tion process. However, BRE investigators conducted 4,323 compliance inspections, up from the previous year's 3,983 compliance inspections.

The division's Legal Section had a tremendously productive year. Legal staff completed 39,320 administrative actions (denials/suspensions/revocations), up almost 30 percent from last year.

Finally, continuing its efforts to maintain and enhance public safety, the division, working in conjunction with the Private Investigation, Recovery, and Security Advisory Council (PIRSAC), completed a review and revision of the Security Officer Training Curriculum Guide in fiscal year 2009-2010. (The PIRSAC is a statutorily mandated assembly whose membership consists of representatives from the regulated industries appointed by the Commissioner of Agriculture. The Council serves in an advisory capacity to the Department in matters pertaining to the regulated professions under Chapter 493, F.S.)

This is important because the schools and training facilities that provide the requisite training for licensure as security officers must use the division's Curriculum Guide in designing their curriculum, administering the training, and conducting examinations. The division initiated the review of the Curriculum Guide with an eye toward making the necessary changes to ensure that security officers entering the profession would have the proper training to meet current needs of the industry and to perform the important role of protecting the general public.

There were minor changes made throughout the Curriculum Guide, with particular

focus made in two subject areas. First, access control was included as a subject area in the Curriculum Guide. Second, the terrorism awareness subject area was expanded both in terms of content and in terms of the length of time to be devoted to this topic during training.

It is important to understand the role the security officer plays in performing his or her duties. Security officers are charged with the responsibility of protecting people and guarding property. While security officers do not have the same level of responsibility and authority as law enforcement officers, some of the duties that security officers perform are similar to those performed by law enforcement officers. It is therefore extremely important that security officers be properly trained and fully prepared to meet the unique challenges of manning a security post.

The updated Security Officer Training Curriculum Guide went into effect on July 1, 2010.

Improving Levels of Service

As reported in last year's annual report, the division's level of service to its applicants and licensees declined in 2008-2009 because of the extraordinary increase in the demand for licenses. While the demand for licenses spiraled upward, budget constraints prevented the division from adding the resources necessary to keep pace with demand. The inevitable result was a tremendous backlog of pending applications.

However, the level of service improved substantially in fiscal year 2009-2010, and the improvement can be attributed to three

main causes. First, the additional temporary staff hired the previous fiscal year remained with the division throughout fiscal year 2009-2010. Second, the extensive use of overtime shifts, which began in January 2009, continued throughout all of last fiscal year. The addition of temporary staff and the use of overtime hours were absolutely vital in helping the division to overcome the workload and staffing challenges of the previous year. By the end of fiscal year 2009-2010, the division's level of service had improved dramatically. The division was issuing the majority of licenses within one to two months of having received a complete application.

Finally, the division rolled out a new customer service program and a new telephone system in 2009-2010.

In October 2009, the division launched its "fast-track" concealed-weapon license application intake service. This new service allows anyone interested in obtaining a Florida concealed weapon license to submit an application at one of the division's eight Regional Offices located throughout the state. "Fast-track" processing offers the applicant one-stop convenience: after arriving at one of the Regional Offices, the applicant completes an electronic version of the application at a computer station. Regional Office staff members then take the applicant's photograph and fingerprints, and process the applicant's payment. The entire procedure usually takes less than half an hour to complete. The most important feature of this new service is that it allows division staff to review the application with the applicant present. Thus, errors or omissions that are often found in applications that are received by mail are corrected

before the applicant leaves the Regional Office. The Regional Office then forwards the applications to Tallahassee for processing. As a result, licenses are often issued to these applicants within a month.

In June of this year, the division implemented its new Interactive Voice Response (IVR) to help deal with the overwhelming number of telephone calls received by the Public Inquiry Section. Callers can now obtain information about the division's programs and get answers to commonly asked questions about the division's services without having to wait to speak to a customer service representative. The system is available 24 hours a day, seven days a week, and it is accessible to anyone with touchtone telephone service. The most important feature of this new service is that it allows concealed weapon license applicants to track the progress of their applications as those applications move through the division's review process. New applicants can enter a unique tracking number into the IVR system using the telephone keypad to get the latest information concerning the status of their applications. Renewal applicants can simply enter their license number into the system to get this information.

The "fast-track" application intake service and the IVR system represent the division's latest efforts to improve the delivery of its services while coping with the ever-increasing demand for licenses.



Training and Development Section

It is the skills and qualities of the Department's employees that enable it to lead the nation in protecting agriculture and consumers. It is these employees that tirelessly work to protect and promote the value of the state's natural resources and food supply. In addition, these employees also serve as an advocate and support for the state's consumers and visitors. Recognizing the value and impact of its employees in these endeavors, the Department provides ongoing training as well as educational and recognition opportunities. The "personal commitment and professional pride" of the Department's employees is developed and maintained by this continuing support of employee development.

Training

During fiscal year 2009-2010, the Training and Development Section aided 1,139 employees in the development of their knowledge, skills, and abilities as part of the Department. First, progress was made soon after hiring with participation in the New Employee Orientation (NEO). For some employees, either at hiring or by promotion, further skills were developed through the curriculum of the Department Supervisory Standards Training (DSST). Additional staff development included topics such as Working with Diversity, various Project Management skills, and the ever-evolving Software Training. A number of other training topics were provided, with some being custom developed based on the needs assessments of specific divisions. To utilize the valuable resources within the Training and Development Section, assistance was made available to other divisions to work with them in evaluating their training needs and then developing the curriculum that meets those needs.

In view of travel limitations, the Training and Development Section continued to develop innovative use of technology for distance learning. The use of WebEx was expanded, along with an increased use of the intranet as a learning resource depot. This endeavor to expand the Department's training venues was assisted by staff in the Bureau of Personnel Management. That bureau maintained its role of supplying subject matter experts for a variety of new employee and supervisory presentations, as well as responding to requests for assistance in developing specific topics as requested.

Education

Continuing employee development is not only accomplished with training at the workplace. The Department's management staff understands that and encourages and supports continued education and personal development using the classes at universities, community colleges, and technical centers throughout the state. As a result of Department support, during fiscal year 2009-2010, 33 employees continued their post-high school education by taking workrelated classes that qualified for tuition reimbursement. Along with that group, an additional 235 employees participated in the State's Tuition Waiver program, which provides them with a no-cost flexible class selection option.

Awards

The Department's staff at every level appreciates the exemplary achievements of its hard-working and dedicated employees. As part of its appreciation, Department management encourages and supports participation in the Prudential Financial Davis Productivity Awards program. During fiscal year 2009-2010, a total of 73 individuals were recognized by this awards program. As a result of these employees' initiatives and hard work, the Department, the State of Florida, and its citizens had a dollar benefit estimated at approximately \$2.9 million. This is an extraordinary accomplishment worthy of the recognition and awards received.

Valuing the dedication and loyalty of its employees, the Department provides service awards to employees in appreciation for their length of service. The Service Awards certificates are provided in five-year increments. The Training and Development Section takes the lead in this, and during fiscal year 2009-2010, approximately 576 employees were awarded certificates for their continued service to the Department.

Business Management Initiatives

Over the last two years, the Department has worked to combine project management methodology with the Department's application development methodology in order to improve the effectiveness and efficiency of creating or enhancing the Department's business information systems. This effort is called Information Technology Life Cycle (ITLC) and is defined in the Department's Administrative Policy and Procedure, No. 1-2.

A fundamental strategy toward this end is to train selected professional staff in basic project management, and business requirements gathering and analysis, since business drives the need for information technology. In March 2009, 16 professional staff participated in a two-day "Real Life" Project Management Workshop conducted by the Heron Bay Group, Inc. In January 2010, a four-day workshop on business needs and requirements was conducted by Dr. David Dickey from the Educational Service Institute-International (ESI). This workshop was attended by 18 professional staff from a cross-section of the divisions within the Department.

An ITLC web site was developed to guide users with the application development process and to have a place to find training materials and resources on project management and business analysis.

By developing additional expertise in project management and business analysis within each of the divisions, Department projects will have a greater probability of meeting business needs and requirements, satisfying customers, and being delivered on time and within budget.

AGMIC - Information Technology

Disaster Recovery Planning and Testing

May 10-17, 2010, Agriculture Management Information Center (AGMIC) staff performed its annual exercise of the recovery of computer applications residing on hardware platforms which AGMIC maintains. This year the Disaster Recovery Plan (DRP) test was performed at the Disaster Recovery Lab located in the Nathan Mayo Build-

ing. This was a coordinated effort between AGMIC and division staff that tested the applications from the lab in Tallahassee. This year's test included the recovery of the following applications:

- Administration: Administration Imaging Management System and Travel Module (AIMS)
- Administration: Personnel Imaging System (PDMS)
- 3. Administration: Enterprise Imaging System (EIS)
- 4. Office of Agricultural Law Enforcement: ACISS Case Management System (ACISS)
- Office of Agricultural Law Enforcement: Commercial Transport Imaging System (CTIS)
- 6. Office of Agricultural Law Enforcement: Bill Of Lading Scanning System (BOL)
- 7. Fruit and Vegetables: Citranet
- 8. Fruit and Vegetables: Freshnet
- 9. Fruit and Vegetables: BRIX Acid Unit (BAU)
- 10. Plant Industry: Canker Imaging

All of these applications had documented recovery plans and had either been tested in the test laboratory or previously restored in a prior test. This practice allowed for additional findings and remediation, along with properly documenting the application's recovery steps. These recovery materials and documentation were then put to test under disaster recovery conditions in the Disaster Recovery Lab during the scheduled annual test. Division users performed a documented verification from the Disaster Recovery Lab in the Nathan Mayo Building. All applications scheduled for testing were fully recovered.

Technology Policy Compliance Project

The Technology Policy Compliance Project is a multiyear, ongoing project. It is a joint consulting project between the Division of Administration and the Office of Inspector General (OIG) to assess compliance with select Department information technology (IT) policies and procedures. A methodology was established for assessment of these critical policies and the identification of key vulnerabilities.

During fiscal year 2009-2010, several policies were modified, specifically in the area of disaster recovery, mobile device encryption, and change management. These policies were modified to address identified vulnerabilities. During fiscal year 2010-2011, the team will meet with executive management to provide a briefing on the status and to engage executive management in the review and ranking of mission-critical applications within the Department. Also, assessment of the new policies will begin to occur in this upcoming fiscal year.

New Storage Area Network and Replication Software/Hardware Purchase

Toward the end of fiscal year 2009-2010, the Department was able to procure a new storage area network (SAN) to replace the existing SAN in the Central Computing Facility, located in the Nathan Mayo Building in Tallahassee. The new SAN will offer significantly more storage to meet the growing needs of the divisions for their mission-critical applications and data. It will also allow the Department to continue its efforts in server virtualization. Along with the purchase of the new SAN, the Department was able to purchase a hardware/software solution for replicating data residing on the

new SAN to the old SAN, which will be relocated to another facility. This will allow for very quick fail-over in the event of network or SAN failure. The SAN will go online in fiscal year 2010-2011.

Replacement of the Sun 6900 Enterprise Server

During fiscal year 2009-2010, the Department was able to plan a migration and purchase four Sun T5220 servers to replace the large Sun 6900 Enterprise Server located in the Central Computing Facility. Many of the Department's mission-critical applications and data reside on the Sun 6900 Enterprise Server. The Department migrated all data and applications from the Sun 6900 Enterprise Server to the four new servers. This migration resulted in increased computing speed and a lower cost of maintenance. This project was completed toward the end of fiscal year 2009-2010.

Office of Inspector General

The Office of Inspector General (OIG) is established in accordance with Section 20.055, Florida Statute. The OIG provides a central point for coordination of and responsibility for activities that promote accountability, integrity, and efficiency in government.

The mission of the OIG is to protect and promote public integrity and accountability within the Department through audits that detect fraud, waste, and abuse and the investigation of administrative and criminal violations.

The goal of the OIG is to decrease the reoccurrence of such violations through employee awareness and cooperation while providing the Department with a timely, accurate, objective, and useful work product. The OIG also strives to enhance public trust.

To accomplish its mission and goals, the OIG is comprised of two sections: the Auditing Section and the Investigation Section.

Auditing Section

The internal auditing activity provides independent, objective assurance and consulting services to add value and improve the Department's effectiveness at risk management, control, and governance processes. An assurance service is an objective examination for the purpose of providing an independent assessment or opinion in regard to the particular engagement's objectives. A consulting service is an advisory and client-assistance service, the nature and scope of which is agreed upon with the client for each particular engagement.

Internal audit activities are performed in accordance with the General Principles and Standards for Offices of Inspector General and International Standards for the Professional Practice of Internal Auditing as published by the Association of Inspectors General and the Institute of Internal Auditors, respectively. Audit projects involving information technology are also conducted in accordance with the Information Systems Auditing Standards as published by the Information Systems Audit and Control Association.

During fiscal year 2009-2010, 10 assurance engagements were conducted covering performance measures, the Florida State Fair, fraud data analysis, and regulatory enforcement actions. The auditing section

also participated in eight consulting services and coordinated 15 external audits or reviews by federal and other state agencies.

conducting, supervising, or coordinating such inquiries, investigations, or reviews as the Inspector General deems appropriate.

Investigation Section

The Investigation Section conducts inquiries and investigations into administrative and criminal complaints. These complaints are received from a wide variety of sources both inside and outside the Department. OIG cases are categorized into three types:

- Preliminary inquiries, which may be conducted in circumstances when it is necessary to determine the validity of a complaint prior to the initiation of a formal investigation.
- Inspector General investigations, which are formal investigations conducted in accordance with Florida Statute and/ or Department policy and procedures.
- Assist-other-agency cases, which in volve investigative assistance to agencies or law enforcement officers external to Department operations.

The key investigative responsibilities of the OIG are to initiate, conduct, supervise, and coordinate investigations designed to detect, deter, prevent, and eradicate fraud, waste, mismanagement, misconduct, and other abuses in state government by:

- Receiving complaints and coordinating all activities of the agency as required by the Whistle-blower's Act pursuant to ss. 112.3187-112.31895.
- Receiving and considering the complaints that do not meet the criteria for an investigation under the Whistle-blower's Act and

- Conducting investigations and other inquiries free of actual or perceived impairment to the independence of the Inspector General or the Inspector General's Office. This shall include freedom from any interference with investigations and timely access to records and other sources of information.

During fiscal year 2009-2010, the investigation section carried 10 cases over from the previous year, opened 97 new cases, closed 97 cases, and carried forward 10 cases to the next fiscal year.

The Investigation Section recently became accredited. The Commission for Florida Law Enforcement Accreditation (CFA) recently established standards for accreditation for offices of inspectors general. The Department's OIG began the process of complying with the accreditation standards in late 2009 and had its full onsite inspection in April 2010. The CFA reviews all aspects of the OIG's Investigation Section, including policies and procedures, management, operations, and support services. The CFA verifies compliance with 40 recognized standards of excellence. These standards are all mandatory and include requirements for training, guidelines for internal investigation, and establishment of an investigative staff code of ethics. The OIG received an outstanding review with no deficiencies found by the assessors. On July 1, 2010, the OIG received its certificate of accreditation and became the fourth state inspector general's office to be accredited. The OIG's accreditation will be for a threeyear term.



Florida Department of Agriculture and Consumer Services
DACS-P-50